DOCUMENT RESUME

ED 181 613 EC 121 408

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TITLE	Educating Students in Least Restrictive Environments: Instructional Preparation for Teachers. Series II: Planning Instruction Management for Exceptional Children in Regular Classes.
INSTITUTION	Kansas Univ., Lawrence. School of Education.
SPONS AGENCY	Bureau of Education for the Handicapped (DHEW/OE), Washington, D.C.
PUB DATE	78
GRANT	G007500495
NOTE	360p.: For related information, see EC 121 407 and EC 121 409
EDRS PRICE	MF01/PC15 Plus Postage.
DESCRIPTORS	Classroom Arrangement; Delivery Systems; Educational Planning; Elementary Secondary Education; *Handicapped Children; Individualized Programs; *Mainstreaming; Media Selection; Referral; Scheduling; Task Analysis; *Teacher Education; Teachers; Teaching Guides

ABSTRACT

Intended for preservice regular education teachers, the modules in Series II are intended to address the continuous instructional planning which teachers must carry out to meet the needs of exceptional children in regular classrooms. It is explained in a series overview that many of the enabling activities require contact with children in the classroom and therefore the modules should be used in method classes and/or student teaching. An initial module is designed to familiarize the preservice teacher with several different options for providing services to exceptional children. Module 2 focuses on referral systems used by area school districts, while Module 3 provides activities and resources for developing individualized educational programs which comply with P.L. 94-142 (the Education for All Handicapped Children Act). Module 4 gives information on task analysis and application of that process to instructional situations. A fifth module addresses the identification and modification of instructional arrangements to maximize student growth based on observations of a student's strengths and weaknesses. Module 6 focuses on individualizing instructional materials and media, while Module 7 addresses the organizing and planning for individual and group instruction. The final two modules provide information on planning classroom schedules and classroom layouts. A prospectus, student objectives, and enabling activities are listed for each module. Sample forms and handouts are given. (SBH)

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Educating Students in Least Restrictive Environments:

Instructional Preparation for Teachers

ED181613

EC/21408

Series II: Planning Instruction Management for Exceptional Children in Regular Classes

School of Education
The University of Kansas

Managing Editor: Oscar Haugh
Series II Editor: P. Jeannie Kleinhammer

EDUCATING STUDENTS IN LEAST RESTRICTIVE ENVIRONMENTS
Instructional Preparation for Teachers

produced by the
Dean's Grant Project
School of Education
The University of Kansas

The project presented or reported herein was performed pursuant to Grant #GOO7500495 from the Bureau of Education for the Handicapped, U.S. Office of Education, Department of Health, Education and Welfare. The points of view expressed are those of the contributing authors and do not necessarily reflect the position or policy of the U.S. Office of Education. Further, no official endorsement by the U.S. Office of Education should be inferred.

Issued Fall 1978

FORWARD

The instructional modules included in this unit were designed for use by preservice regular education teachers in University of Kansas' School of Education. More than fifty percent of the faculty in the School of Education participated in the development of one or more modules designed for integration within the regular teacher education curriculum at the University of Kansas. Moreover, the modules were developed at least in part by individuals who would teach the content. Thus, while the modules are appropriate and complete for use by our own faculty, they may seem inappropriate or incomplete to another reader. The module format was adopted primarily to maximize instructor flexibility in incorporating this content into the existing preservice curriculum. Because of the form of the modules, the instructor who adapts them for use will need to become thoroughly familiar with module content as well as to provide examples of how principles included in each module can be applied to the content of his/her course. We realize that this does limit the usefulness of this curriculum outside the University of Kansas School of Education, but maximizes the utility of the units within the School of Education.

ASSUMPTIONS OF THE CURRICULUM

In accord with the philosophical basis of the Dean's Grant Project at the University of Kansas, these modules were field tested and are being taught as integrated portions of regular education content. The advantages of this approach include the following:

1. This manner of presentation is in consonance with the underlying philosophy of mainstreaming. While modules could be included in separate, special education courses, the University of Kansas' modules were developed with the intent of ending the separation between regular and special education methodology in preparing teachers to serve children in Least Restrictive Environments.

2. Integration of Least Restrictive Environment content into regular education courses will enhance student appreciation of the fact that teaching mildly handicapped students in regular classrooms is an integral part of the teaching responsibility, not an educational afterthought.

3. Integration of the modules into regular education classes will facilitate student ability to apply techniques previously associated with special education to regular education content. Also, integration of the modules will enhance student awareness of the critical importance of sound instructional technology in all content areas for mildly handicapped students.

4. Integration of Least Restrictive Environment content into regular education courses will enhance the potential application of this content to addressing the unique needs, learning styles, and interests of all students.

OVERVIEW OF THE DEVELOPMENT PROCESS

The modules included in series 1-5 of *Educating Students in Least Restrictive Environments* are the culmination of the efforts and commitment of a large proportion of the School of Education faculty at University of Kansas during the 1975-1978 Dean's Grant Project.

The conception of *Educating Students in Least Restrictive Environments* as a curriculum development project at University of Kansas' School of Education occurred during 1975 when faculty generated and reached consensus on a list of competencies which would serve as a basis for the new Least Restrictive Environment content.

Through Summer, 1976, faculty volunteers wrote an original set of modules addressing each competency. This first attempt at developing the new curriculum resulted in a series of modules which varied greatly in length, format, demands on the instructor, and class hour demands for instruction. Thus, on the basis of formative evaluation of the modules, format and content revisions were made in order to produce a more consistent curriculum which could, in fact, be taught within the course/time parameters of the overall School of Education curriculum. This revision process included changing content of modules, deletion of some modules and development of new modules, as necessary to ensure a consistent and coherent curriculum.

The final step in developing the *Educating Students in Least Restrictive Environments* curriculum was summative evaluation of the curriculum in the form of field testing modules in regular education courses. During Fall, 1977 and Spring, 1978 this summative evaluation was conducted, and modules were further revised on the basis of recommendations from regular education faculty who taught the new material and students who received the instruction. The resulting series constitutes the *Educating Students in Least Restrictive Environments* curriculum.

We sincerely hope that the *Educating Students in Least Restrictive Environments* curriculum will be useful instructional tool to both faculty and students of the School of Education, University of Kansas, as well as to other institutions of higher education and inservice teachers who may wish to adapt our curriculum for training regular educators to teach handicapped students in the Least Restrictive Environment.

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1975-1978

Acknowledgements

The *Educating Students in Least Restrictive Environments Curriculum* represent the efforts of many University of Kansas School of Education faculty who were involved in considering and revising competencies, writing original modules, reviewing the original modules, and revising or developing new modules. While authorship of modules included in this curriculum reflects only those faculty who contributed to the revised series of modules, the task of these authors would have been overwhelming without the original contributions of faculty who developed the first units. It is only appropriate, then, to acknowledge all persons who have provided voluntary time and effort to the writing process and to consider those persons as contributing authors.

Contributing Authors include:

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Series II Planning for Instruction

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Series Overview

Series II - Planning for Instruction

P. Jeannie Kleinhammer

The modules in Series II, Planning for Instruction, are intended to address the continuous instructional planning which teachers must carry out to meet the needs of exceptional children in regular classrooms. This series of modules is one portion of a complete curriculum, *Educating Students in Least Restrictive Environments: Instructional Preparation for Teachers,* developed by the Dean's Grant Project, School of Education, University of Kansas. (A complete listing of modules included in the five instructional packages can be found on page 3.)

Recommended Placement of Modules for Instruction

The content of modules in this series is intended for integration with the usual content of methodology courses. In some cases, the instructor should plan for modules to be delivered in a field setting so that teaching skills can be practiced with students. In spite of the module format adopted for the *Educating Students in Least Restrictive Environments* curriculum, optimal delivery of this content would entail total integration of each module with other methodology topics; thus, this content should be delivered as it is integrally related to other methodology topics, not as additional or conceptually separate course content added to address the needs of exceptional students.

The modules in this series have been field tested and taught in various courses at the University of Kansas, including methodology courses in music education, curriculum and instruction, art education, and physical education.

Overview of the Series

Modules in this series are intended to address the continuous instructional planning which teachers must carry out to meet the needs of exceptional children in regular classrooms. In addition to content related to the formalized planning reflected in selection and use of resource persons and development of the Individualized Education Program, this series includes the daily planning of curricular and instructional modifications necessary to meet the needs of each exceptional child implicit in the spirit of full IEP implementation.

Instructional Considerations

Specific recommendations to the instructor for delivery of each module are included in this book. The instructor would be advised to review these recommendations as well as the module content carefully in order to plan for instructional time, independent work required of students, and field based or classroom based activities. Also, the instructor should review readings included with the module and place on reserve copies of student readings which are not included in an Educational Library. Finally, the instructor should plan appropriate examples and/or discussions as recommended in the modules to insure relevance of the module to course content.

The readings included for each module in the series may not reflect the instructor's preferences. However, the readings presently included or recommended were judged to be most appropriate for use by preservice teachers at the University of Kansas. The criteria for selection of each reading included the consideration of the course content into which modules would be integrated, the desired depth of readings considered appropriate for undergraduate students, and the instructor's preference. Thus, readings may need to be modified when a module is used in different courses; with different students, or by different instructors. Such modifications are, or course, welcomed and anticipated as a necessary part of the continuous curriculum development and revision process essential to meeting the needs and skills of individual preservice teachers.

Educating Students in Least Restrictive Environments, SERIES TITLES

Series I Characteristics and Assessment
1. Characteristics of Normal and Exceptional Learners
2. Classroom Assessment Principles and Procedures
3. Theories of Learning
4. Writing Behavioral Objectives

Series II Planning for Instruction
1. Approaches for Delivering Special Education Services
2. Referral Systems
3. Development and Use of the IEP
4. Analyzing Instructional Tasks
5. Selecting Instructional Activities for a Students Strengths and Weaknesses
6. Individualizing Instructional Materials and Media
7. Organizing and Planning for Individual and Group Instruction
8. Planning Classroom Schedules for Individual Instruction
9. Planning Classroom Layouts for Exceptional Learners.

Series III Instructional Management
1. Instructional Planning for Learner Participation
2. Verbal and Nonverbal Communication
3. Questioning Techniques for the Classroom
4. Planning Frequent Success Experiences for the Learner
5. Motivational Techniques
6. Managing Your Classroom
7. Formative Evaluation in the Classroom
8. Maintaining Records of Student Progress
9. Reporting Student Progress to Parents
10. Reporting Student Progress to Ancillary Personnel

Series IV Communication Skills
1. Communication Skills
2. Attitudes Toward Exceptionality

Series V Legal, Philosophical, and Social Issues: Implications for Handicapped Students
1. Litigative and Legislative Trends in Educating Handicapped Students.
2. Legal Protections for Handicapped Students in the Schools.
3. Teacher Responsibility and the Law.
4. Historical Issues in Educating Handicapped Students.
5. Social and Ethical Implications of Terms and Labels.
6. Values, Priorities, and Policies Regarding Handicapped Students.
7. Ethical and Social Consequences of Testing, Grouping, and Special Treatment.
8. Social Determinants of Attitudes toward Exceptionality.
9. Influence of Social and Environmental Interactions on Self Concept of Handicapped Students.
10. Public Attitudes, Political Climate, School Policy: Impact on Treatment of Exceptional Learners.

APPROACHES FOR DELIVERING SPECIAL EDUCATION SERVICES

by
Joel Colbert and P. Jeannie Kleinhammer
University of Kansas

The purpose of this module is to familiarize the student with several different options for providing services to exceptional children. Traditional and nontraditional structures for providing services to exceptional children are described and descriptive information about support services that are often needed by exceptional children are explained.

Student Outcomes

Upon completion of this module the student should be able to describe briefly (and differentiate between) the five service delivery models presented. In addition, the student should be able to identify and briefly explain a variety of service and support options often used in the public schools.

Instructor Information

Prerequisites:

No specific prerequisites have been identified for this module. However, it is assumed that the students have some familiarity with terminology associated with different types of exceptional children (i.e., L.D., E.D., M.R. etc.). Some acquaintance with basic legislative and legal issues in special education will also facilitate the understanding of content in this module.

Organization:

Four basic readings (three required; one optional) comprise the basic *content* for this module. In addition, students are required to develop a two page paper in which they contrast special education services in their local school district with one of the models included in the readings. Class time will be devoted to discussion of the readings and completion of the simulated "placement" activity, WIN, PLACE or SHOW.

Content Overview:

The readings provide descriptions of five different delivery models and descriptions of several kinds of support services required for exceptional children. More specifically, the readings include:

1. Delivery Models
    - A. Deno's Cascade
    - B. Dunn's adaptation of Deno's Cascade
    - C. The Pinckney Model - Chaffin
    - D. Reynolds' Modification of the Cascade

2. Common Structure for Providing Service
    - A. Regular Class Placement
    - B. Self-Contained Special Class Placement
    - C. Part Time Special Class Placement
    - D. Resource Room Placement
    - E. Resource Center
    - F. The Itinerent Teacher
    - G. The Consulting Teacher
    - H. Homebound Instruction
    - I. Hospital Instruction

3. Instructional Support Service

The readings also provide role definitions of a variety of support personnel including School Psychologists, Speech Therapists, Physical and Occupational Therapists, and Social Workers.

Suggestions for Teaching:

At least two (perhaps three) one hour class sessions will be needed for completion of this module. One session will be needed to further explain the delivery models described in the reading, to answer questions about the readings and to explain the written assignment. A second session (after the students have completed the written assignment) should be devoted to small group and class discussion about the assignment. The final session should be devoted to the simulated placement activity. More specific suggestions are:

1. Require that students complete the readings prior to the first session. A short quiz (announced beforehand) over the readings would probably be motivating.

2. The purpose of the written assignment is to allow the students to compare the theoretical (or ideal) models described in their readings with what really goes on in the public school (real) settings. Discuss the real/ideal concept with the students. Stress that they should identify *one* model in their readings that they like best and then determine the extent to which that model is operational in the public school they choose to compare it with.

3. Class discussion over the written assignment may include both small and large group discussion.
    Small group: Each student would identify the ideal program they selected and briefly describe its relationship to reality. Summary information could be collected for each group concerning:
    - a. which ideal model was selected most frequently by group members; which next etc.
    - b. estimates of what percent
        of the ideal model was actually being implemented in the (real) school setting.
    - c. Some statement about the quality of "real" services provided.

    Large Group: Brief reports from small group leaders and general discussion.

4. WIN PLACE or SHOW. Complete directions are included in the appendix.

Suggestions for Evaluation:

Pre and posttest have not been developed for this module. The primary learing that occurs should relate to the pupils' understanding of ideal versus real services—a tough notion to evaluate since "real" services differ from school to school and may be perceived differently by different individuals. Therefore evaluation will probably be based on the initial test over the readings and over the two page written assignment.

APPROACHES FOR DELIVERING SPECIAL EDUCATION SERVICES

by
Joel Colbert and P. Jeannie Kleinhammer
University of Kansas

Prospectus

When a teacher has acquired skill in observing children and youth in school and can make judgements as to which problems are beyond his/her scope of responsibility and competencies, there is a need for additional knowledge and skill. The teacher needs to have a thorough knowledge of school and community resources and be able to select appropriate resources from them.

The purpose of this module is to acquaint students with resources available in the schools and district that are appropriate for meeting the needs of the exceptional learner. In addition to service options, support personnel, and referral procedures, comprehensive models for delivering these services to the exceptional child are covered.

Student Objectives	Enabling Activities
1. The student should be able to identify and briefly define 10 support services available to handicapped children.	1. Reading 1, Meyen, pp. 25-34. 2. (Optional) Reading 2, Walden et al. (On reserve in Education Library)
2. The student should be able to briefly describe three service delivery models.	1. Reading 3, Meyen, pp. 34-46. 2. Reading 4, Reynolds.
3. The student should be able to list support services available to handicapped children from most restrictive to least restrictive.	1. Assignment: Two page paper describing the services available within the district where the student is involved in a field experience. 2. Class discussion: Relate what is currently available in a school district to the services described in the readings in Activities 1 and 2.
4. The student should be able to select and defend an appropriate service option for a handicapped child when given a brief description of the child's learning characteristics.	1. Take home assignment: Complete WIN, PLACE or SHOW activity. 2. Small group activity: Working in groups of 4 or 5, students should discuss the items on WIN, PLACE or SHOW and reach consensus as to the best service option for the child described in each item. 3. General class discussion: Summary and discussion of Activity 2.

Readings:

1. Meyen, E. *Exceptional Children & Youth: An Introduction*. Denver: Love Publishing Co., 1978, pp. 25-34.
2. Walden, S.B. et al., *Special Service Personnel: A Source of Help for the Teacher*. Cedar Rapids, Ia.: Special Education Curriculum Development Center, 1971.
3. Meyen, E. *Exceptional Children & Youth: An Introduction*. Denver: Love Publishing Co., 1978, pp. 34-46.
4. Reynolds, M.C. New Perspectives on the Instructional Cascade. Paper presented at a Conference, "The Least Restrictive Alternatives: A Partnership of General and Special Education," Minneapolis, Minnesota, November, 1976.

SERVICES

Central to the changes occurring during the 1970s have been the methods used in public schools to provide services to exceptional children and youth. When the special class was considered the primary means for delivering special education, placement decisions simply involved whether or not a student was eligible for special class placement. Today, the situation is significantly different. Not only do the new state and federal laws require compliance, but most local districts have realized the necessity to develop specific orientations or philosophies upon which to base the organization of their special education services.

For the most part, the major treatment form required by exceptional children is special instruction aimed at improving *academic, vocational,* or *social* performance. Some children, of course, do require other forms of assistance, such as speech or physical therapy, medical treatment, or some type of psychological counseling. Further, within the general realm of specialized instruction, a number of teaching methods, programs, approaches, curriculums, materials, and instructional technologies may be applied to modify instruction to an exceptional learner's specific needs.

Special education may be viewed from at least three primary perspectives: (1) determining the most appropriate instructional or curriculum program; (2) establishing the most accurate diagnostic base for programming; and (3) selecting the most efficient and economical administrative structure for delivering services. Obviously, the latter two relate to instruction; and instruction, to be effective, depends upon accurate diagnosis and effective administrative structures. After having reviewed a large number of public school programs over several years, however, this author believes that too many districts place primary emphasis on creating organizational structures which contribute to

from Meyen, E. *Exceptional Children & Youth: An Introduction.* Denver: Love Publishing Co., 197
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precise diagnosis and appropriate placement and not enough emphasis on what happens after a child is assigned to receive a particular service.

Special education is not a placement process nor is it an evaluation system, even though both are essential to quality special education services. Special education in the true sense occurs only when a child or youth receives services appropriate to his or her needs. In this context, much of what is offered in the guise of special education services is not, in fact, special education. To assume that special education occurs automatically at the time a child or youth is placed or assigned to a service may be comforting to an administrator, but such placement provides no assurances of effective special education unless those responsible for delivering the services are competent and have access to the appropriate resources.

Much of the literature published on special education focuses on *delivery models* or *organizational constructs*. The literature reveals that the trend toward mainstreaming or least restrictive environments clearly has influenced the design of service delivery models and the language used to describe them. Many models, however, could be criticized because of their abstract nature and their tendency to create "unique" terms. They also tend to focus only on mechanisms for delivery of services and not on the services themselves. This probably can be attributed to the source of such models—i.e., persons with administrative skills and/or responsibilities. The task of refining the services is the responsibility of professionals who deliver the service—e.g., teachers, therapists, clinicians, and parents.

Models and constructs or organizational structures are important, and most local special education programs are developing organizational plans to guide them in making decisions regarding handicapped children and youth. This move toward conceptualized planning is explained by Johnson (1975, p. 153), who wrote about models for alternative planning: "Today our business is not only very complex, but is also subject to the requirements of accountability—accountability for demonstrating that what we do with and for handicapped learners is productive." The employment of due process procedures, individualized planning, and the transition from a special class orientation to a least restrictive orientation certainly has complicated the role of special education administrators. These changes also have influenced the roles of teachers, other administrators, and support personnel.

One of the difficulties encountered in writing about special education services is that not only is a wide variety of service options available, but most districts tend to create their own terms for describing personnel and programs. For example, a person trained as a specialist in instructional programming for handicapped children may be called a consultant, strategist, materials and methods specialist, consulting teacher, or some other title. Common across most programs, however, is the emerging philosophy of the least restrictive alternative. If one is familiar with the general type of delivery model being used, the lack of uniformity in personnel titles is not a problem. In many ways, the creation of titles by local districts to describe their own programs has the advantage of allowing services and personnel roles to be structured to meet local needs.

The following discussion describes program options and support personnel roles in as standard a form as possible. Delivery service models which have been suggested in the literature as complying with the least restrictive alternative philosophy also will be discussed.

Special Education Services

Regular Class Placement

Placement in a regular class becomes a service option when instruction offered to the exceptional student is designed to meet the student's specific needs. Such placement assumes that the regular class teacher has received training in adapting instructional materials or in teaching methods specific to the student's needs, and that the teacher has access to necessary resource materials and consultation.

Self-Contained Special Class Placement

The self-contained special class generally is reserved as an option for students requiring full-time assignment outside the regular class. Until the late 1960s, special classes frequently were used in service delivery for the mildly handicapped. Although still a viable option for some students, the self-contained special class is not a primary option for most exceptional children.

Typically, a group of children with similar problems is assigned to a teacher who is responsible for planning and carrying out the students' educational program. The teacher may be assisted by an aide or paraprofessional, and students may receive services from other specialists. For the most part, however, their education is delivered through placement in the special class. This option is used primarily for students with moderate to severe handicapping conditions.

Part-time Special Class Placement

An option used extensively, particularly with the mildly mentally retarded, is part-time placement in a special class. This option differs from the resource room (discussed next) in that the student is part of a group during assignment to the special class and generally is assigned to the special class for at least half the school day. In the move to eliminate or reduce special classes, students likely will receive special instruction in basic skill subjects and will be integrated into regular classes for other experiences. At the secondary level, students may attend selected regular classes but receive assistance with academic and job readiness skills in the special class.

This option has advantages for exceptional children who have difficulty in working with several different teachers. It also has advantages for regular classroom teachers who have difficulty in accommodating the exceptional student's instructional needs while simultaneously meeting the needs of the larger group of nonhandicapped students. The special class teacher spends more time with the student and, consequently, is able to function in both a counseling and teaching role. In moving from full-time special classes to the least restrictive alternative model, many districts have utilized the part-time special class placement as a transition phase.

Resource Room Placement

This option is fast becoming the most popular service delivery vehicle for providing special education to the mildly handicapped. Students typically are referred to a specially trained teacher on the basis of assessed academic difficulties. The resource teacher maintains an instructional classroom in which teaching is highly individualized. The resource teacher may work with students in small groups when appropriate, but is concerned primarily with delivering remedial or supplemental instruction based on prescribed objectives for individual students. Although extensively used for mildly handicapped students, the resource room is also particularly popular in the area of learning disabilities.

The resource teacher functions in a teaching role, but also frequently assumes major responsibilities in educational assessment and in developing prescriptions. An additional major responsibility of the resource teacher is to establish and maintain communication with the regular classroom teachers of students assigned to the resource room.

Placement in the resource room is intended to be short-term, and the student is returned to the regular class when sufficient progress is noted. For many students, however, the combination of resource room and regular class placement remains as the least restrictive alternative. Thus, not uncommonly a student is assigned to a resource room throughout the elementary and early secondary grades.

Resource Center

A relatively recent service which is gaining popularity is the resource center. Although resource centers take varied forms, they generally are organized as a center comprised of one or two rooms and staffed by two or more teachers. Teachers assigned to the centers constitute a team capable of working with students having various handicapping conditions. Although occasionally used at the elementary level, they are found more frequently at the junior- and senior-high levels. Students are referred to the centers for specific instruction; they may be assigned for one period per day, and rarely more than three periods. Most instruction is on an individual basis, with considerable emphasis on independent work for older students.

This approach has many advantages, particularly at the secondary level, at which the centers can be presented as an instructional resource, reducing the stigma often identified with special programs. Resource centers also allow for teams of teachers to work cooperatively, making available more instructional resources for individual student needs.

The Itinerant Teacher

The role of the itinerant teacher is differentiated from that of the regular or special class teacher in that the itinerant teacher is not responsible for a classroom. Itinerant teachers provide direct services to handicapped children and youth who are assigned to regular classes or to other education settings, and provide tutorial instruction as a supplement to instruction offered by the student's regular teacher. Districts using itinerant teachers generally operate a referral system whereby teachers seeking instructional assistance for a particular student initiate a referral. This option has been used to a considerable extent in providing services for visually handicapped students. Itinerant teachers have been used to assist students in learning braille, preparing materials in braille and, in general, to provide support services in assisting the visually handicapped to maintain themselves in regular classes.

The descriptive term *itinerant* is applied to a wide range of personnel including speech clinicians, school psychologists, and social workers, in that these professionals may provide services to a student at different times. *Itinerant teacher* is used in the context of this discussion, however, to define teachers who provide direct instructional assistance to handicapped students while the student remains in the regular or special class. In other words, the itinerant teacher takes services to students, in contrast to students going out for instruction, as they do in utilizing resource room services. A positive feature of the itinerant teacher option is that, by working with the student in his or her class, these teachers are able to coordinate instruction closely with that offered by the student's regular teacher. This also allows the itinerant teacher to observe the student routinely in the natural classroom instructional setting.

The Consulting Teacher

Various titles are used by districts to describe this service option. Basically, the role of the consulting teacher is to provide consultation to teachers and other personnel involved in the exceptional child's program. This role differs from that of the itinerant teacher in that the consulting teacher does not provide direct services to handicapped children or youth except for purposes of demonstrating a technique as part of the consulting role. Most districts are careful to not assign supervisory responsibilities to consulting teachers. The intent is to make available to regular classroom teachers a person who is experienced in special education instructional techniques, who understands exceptional children, and who is skilled in the consultation process.

With the growing emphasis on enhancing the regular class teacher's responsibility in meeting the needs of exceptional children, this service option can be anticipated to increase in popularity. Certification requirements for consulting teachers or for similar roles are beginning to emerge. Early requirements typically call for a master's degree, teacher certification and/or experience in teaching exceptional children, and selected training experiences specific to the consultation process. This service model someday may become a major option as more exceptional children are retained in regular classes. The consulting teacher also might assume a role in the delivery of inservice training.

Child Study/Diagnostic/Evaluation/Prescriptive Teaching Center

No standard term has evolved to describe the comprehensive evaluation center which combines testing, experimental instruction, family counseling, and instructional planning. Such programs, however, are beginning to develop, and are comprised of highly coordinated referral, evaluation, and instructional planning services. They are designed so the student can be observed closely while responding to newly prescribed programs or services, and allow for changes to be made before a student actually is placed in the recommended program.

Such centers offer many advantages in interdisciplinary planning. They also provide opportunities for working with parents in instructional planning and in helping them better understand their child's capabilities.

Homebound Instruction

To minimize interruptions in a student's education caused by short- or long-term confinement to the home, special teachers routinely are employed by most districts to tutor homebound students. Such teachers are assigned a caseload, and visit the student in the home on a regular basis. The primary role of these teachers is to assist the child's regular teacher in preparing instructional plans which can be pursued with the homebound student on a tutorial basis. This option is intended for short-term periods of time. Under unusual circumstances, however, homebound instruction may become the student's primary source of instruction.

Hospital Instruction

Instruction for students confined to hospital settings frequently is handled in the same manner as homebound instruction. The extent of instruction offered to a hospitalized student varies according to the child's conditions. Some large children's hospitals maintain small instruction staffs in cooperation with local school districts. The goal is to help students maintain progress in school programs.

Instructional Support Services

The movement toward mainstreaming has resulted in an increased emphasis on establishing support services, to make it easier for the exceptional child or youth to remain in the regular class. Support services may be defined in different ways. They could be defined as direct services provided by specialists other than teachers (e.g., speech clinicians, school psychologists, physical therapists); or they could be defined as services beyond those provided by the regular classroom teacher. In the latter context, the resource teacher, itinerant teacher, or even special class teacher might be considered as providing support services.

This author has elected to use the term *support services* to apply to special services other than educational placement or primary assignment for students. Obviously, a child could be assigned to a regular class and also to a resource room; in this situation, the resource room would be classified as a support service. For another student, the resource room may be the student's primary assignment. Thus, in the interest of clarification, all services which could be primary educational placements for students have been included in the above descriptions of instructional service options.

The following list is restricted to services offered by specialists whose primary role is other than classroom instruction. The services will be identified by role.

School Psychologist

During the early development of special education, school psychologists provided testing services. Although they continue to assume major responsibilities in diagnosis, they also are becoming more involved in curriculum planning, consultation with teachers and parents, case management, and coordination of the IEP process. Districts frequently assign responsibility for chairing IEP conferences to the school psychologist.

Speech Therapist

More exceptional children receive speech therapy than any other special education service. The speech clinician works with children having articulation or language difficulties, as well as children with more serious speech disorders. Speech therapy services are provided in individual therapy sessions, group therapy sessions or, in many cases, through consultation with the student's teacher. Speech and language problems are common among handicapped children. For example, a mentally retarded or emotionally disturbed child may have an accompanying speech problem. Consequently, many receive speech therapy as an additional service. Some children, however, require only speech therapy and do not have other handicaps. A recent trend has been toward providing speech clinicians with more training in the area of language. Also, some school districts are beginning to employ language specialists. Although the increased emphasis on language services can be expected to continue, no pattern has been established on either the nature of the courses provided or the professional training involved. The language specialist conceivably may evolve as a person trained in the combined areas of speech therapy and learning disabilities.

Physical Therapist

Physical therapists provide treatment in the general area of motor performance, upon prescription by a physician. Their services focus on correction, development, and prevention. As more programs for the severely/profoundly handicapped and preschool-aged handicapped children are initiated into the public schools, the availability of physical therapy will be furthered.

Occupational Therapist

Although occupational therapists are not employed routinely in public schools, occupational therapy is a service important to many exceptional children. Occupational therapy involves individual and group activities designed to enhance physical, social, psychological, and cognitive development. Occupational therapy is a major service provided by most rehabilitation centers. Recently, increased attention has been given to the use of occupational therapy in providing services to preschool-aged exceptional children.

School Social Worker

In recent years, the school social worker has emerged as a major resource in programming for exceptional children. These professionals provide a link between the school staff and the family. They provide a variety of case work services, including assistance in interpretation of evaluation reports and recommendations. In some districts they chair child study committees. They also provide a major resource to special educators in working with community agencies.

Examples of other support services are medical treatment, counseling, adaptive physical education, and music therapy. The total spectrum of instructional and support service options previously discussed is found in most large districts offering comprehensive special education services. These services also may be offered by private schools. If all options are to be considered in delivering appropriate programs to handicapped children and youth, most of the service options discussed will have to be made available.

One major difficulty that districts encounter in offering comprehensive services is the low prevalence of children with handicapping conditions. If districts do not have sufficient numbers of children applicable to a particular special service, they are not likely to provide the service, because of the cost involved. PL 94-142, however, will result in more districts having to provide services which they previously claimed were too expensive.

A method whereby small districts can provide comprehensive services is to combine with neighboring districts and form cooperative units. Many states have laws which require or allow for districts to form cooperatives, generally referred to as *intermediate districts* or *units*. Iowa, Wisconsin, Illinois, Texas, New York, and Michigan are examples of states having long histories of intermediate units which offer comprehensive special education services. In some cases, intermediate units have the power to levy taxes much like local districts; in other cases, member districts share the costs of services provided to individual districts. In most cases, the units are governed by boards comprised of representatives from the participating districts.

Service Delivery Models

During the early development stages of special education, public schools generally assigned administrative responsibility for services to a single administrator. This administrator may have been identified in the school organizational chart as the director of special education or special services and, in many cases, might have had additional responsibilities. As programs grew and staffs became larger, the organization was expanded to include supervisors or consultants. The early growth of public school special education was characterized by a direct effort to increase services and to build an administrative hierarchy that would not only assure provision of services but also would assure that placement responsibility and instructional decisions could be identified within reason.

During this early history, little attention was given to conceptualizing service delivery models as a basis for making instructional and placement decisions pertaining to exceptional children. Except for an occasional expression of concern that special education programs were emerging as "small empires," few questions were raised regarding the conceptual base of special education services, and little attention was given to the decision making process that resulted in students being placed in special education programs.

Events of the 1970s have had significant impact on how delivery of special education services is perceived at the public school level. No longer can we merely expand organizational structures to accommodate more services and personnel. School districts now must respond to principles underlying federal and state legislation and must comply with specific legislative requirements. This trend has stimulated considerable efforts by theoreticians and administrators to design service delivery models to aid local districts in structuring service options and making service-type decisions.

The evolving emphasis on service delivery models has been a positive process, entailing movement away from a focus on the child as the primary source of learning or behavioral problems toward including such factors as instructional environment, teaching mode, and the child's instructional history. Some authors have argued that responsibility for the child's failure rests with the school and not with the child. Lilly (1970) has proposed a zero reject model which prevents a child from being administratively separated from the regular class once he or she has been placed in the regular class. This approach forces administrators to examine instructional options within the regular class but is not fully compatible with the principle of least restrictive environment in that it does not allow for full-time placement outside the regular class. Others (Adamson & Van Etten, 1972) have taken similar positions but, when circumstances warrant, they allow for a continuum of service and provide placement in alternative programs.

Three models (Deno, 1970; Adelman, 1971; Chaffin, 1975) have been selected for discussion because of their clarity and direct application to public school settings. Each accommodates the principle of least restrictive environment. Each also takes into consideration instructional factors, in addition to student characteristics. The three models do differ in that Deno's model is comprehensive and applies to all handicapped levels, whereas the Chaffin and Adelman models are most applicable to the mildly handicapped. Conceptually, however, the models can be generalized to the more severely handicapped population. The Adelman model differs from the other two in that it is primarily a teaching or instructional model rather than a service model; but it is included to reinforce the position that true special education occurs only when remediation provided to the student is appropriate. Thus, not just the placement decision, but also remediation, intervention, and instruction are important. The Adelman model offers a helpful instructional decision making framework that can be applied in conjunction with the other models.

Deno's Cascade Model

One model frequently referred to is the cascade system proposed by Deno (1970). Figure 1.1 illustrates the hierarchy of service options offered; they range from the basic segregated model to the most integrated model. Alternatives range from Level I, which represents meeting student needs through regular class placement, to Level VII, which is described as noneducational and most restrictive. The various model levels reflect service alternatives, with larger level numbers used to identify the more segregated or restricted options. Levels also might represent characteristics of students with similar needs. *The cascade model enhances the process of matching program alternatives with student need.*

To apply the model requires that the student be served in the least restrictive environment. For example, if after careful study, a student is placed in a Level III program, his or her performance should be carefully observed. As soon as performance warrants such action, the student should be transferred to a Level II program. The goal is to potentially place all students in the regular class settings of Level I programs if they are capable of being served appropriately at that level.

However, the model does allow for students to be moved to more segregated arrangements. In this circumstance, the attitude of those making placement decisions still should be one of advocating for less restrictive placements. The model's goal is to move students upward to less restrictive alternatives. Downward moves are made only when necessary and only until the student can be returned to a higher or less restrictive placement.

Deno's cascade system appeared in 1970—early in the mainstreaming or least restrictive movement. As a conceptual model, it has become a frame of reference for local districts. Deno's discussion of the system clearly reflects a philosophy that is both compatible with public school settings and complies with the intent of PL 94-142. In describing the system, she states:

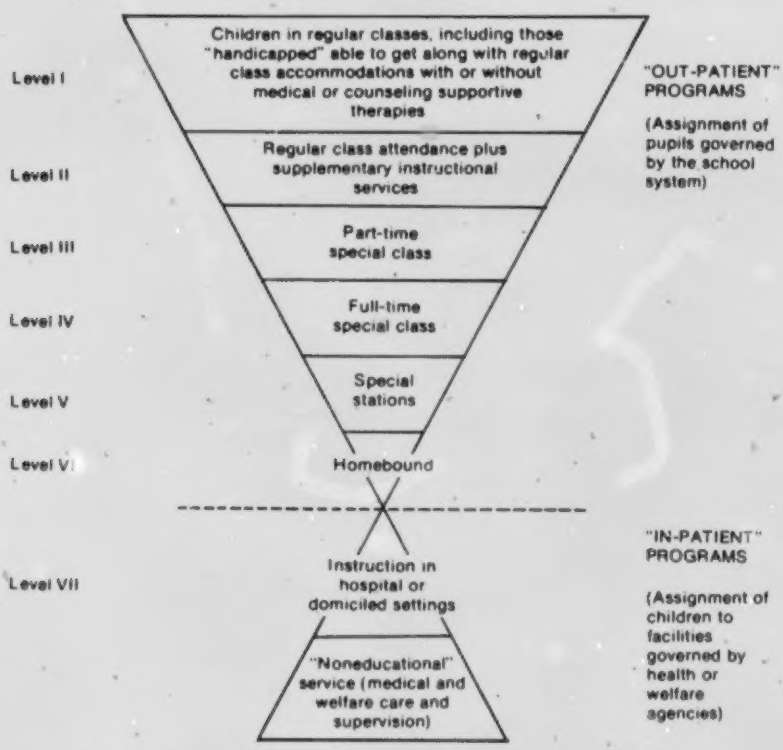
Level I
Level II
Level III
Level IV
Level V
Level VI
Level VII
Children in regular classes, including those "handicapped" able to get along with regular class accommodations with or without medical or counseling supportive therapies
Regular class attendance plus supplementary instructional services
Part-time special class
Full-time special class
Special stations
Homebound
Instruction in hospital or domiciled settings
"Noneducational" service (medical and welfare care and supervision)
"OUT-PATIENT" PROGRAMS
(Assignment of pupils governed by the school system)
"IN-PATIENT" PROGRAMS
(Assignment of children to facilities governed by health or welfare agencies)

Figure 1.1 Deno's Cascade System of Special Education Service

The tapered design indicates the considerable difference in numbers of students involved at the different levels and calls attention to the fact that the system serves as a diagnostic filter. The most specialized facilities are likely to be needed by the fewest children on a long-term basis. This organizational model can be applied to development of special education services for all types of disabilities.

From: "Special Education as Development Capital" by Evelyn Deno, *Exceptional Children*, 1970, *37* (3), 229-237. Reprinted by permission.

> The cascade system is designed to make available whatever different-from-the-mainstream kind of setting is required to control the learning variables deemed critical for the individual case. It is a system which facilitates tailoring of treatment to individual needs rather than a system for sorting out children so they will fit conditions designed according to group standards not necessarily suitable for the particular case. It acknowledges that the school system is a giant intelligence test involving multiple judges who invoke highly variable criteria in making their judgments. It is designed to facilitate modification based upon changing conditions and new assumptions.

Dunn (1973) modified Deno's cascade model and directed the emphasis from levels of program options to types of exceptional pupils (Figure 1.2). He also extended the placement options from 8 to 11. Dunn's modification (inverted pyramid model) represents an improvement in the descriptions applied to placement options and in the emphasis placed on pupil characteristics. His descriptive definitions of Types I, II, III, and IV exceptional pupils add meaning to the placement options. The descriptions of pupil classifications combined with placement options result in a useful reference from which districts can structure service delivery plans and set placement criteria.

Dunn defines the four types of exceptional children as:

> A Type I exceptional pupil is so classified for that segment of his school career (1) when he is enrolled in the regular program of the public day schools, (2) but the teachers in that program have failed in teaching him to such a degree (3) that special supplementary instructional materials and equipment have been made available to him and/or special education consultive services to the regular teachers who work with him; special educators are not directly teaching the child.
>
> A Type II exceptional pupil is so classified for that segment of his school career (1) when the regular teachers have failed in teaching him to such a degree (2) that he is receiving direct instruction from one or more special educators, (3) though he continues to receive part of his academic instruction in the regular program, and (4) may be enrolled in either a regular or special class.
>
> A Type III exceptional pupil is so classified for that segment of his school career (1) when he is receiving no academic instruction in the regular program of the public day schools, but (2) is in a separate self-contained special education day program in the local school system.
>
> A Type IV exceptional pupil is so classified for that segment of his school career (1) when he is unable to attend any type of day school program provided by the local school system, but (2) is in a special boarding school or on hospital or homebound instruction.

Chaffin's Full-Service Model

In contrast to Deno's (1970) cascade model and Dunn's (1973) modification, Chaffin (1975) presents a model which is less comprehensive in

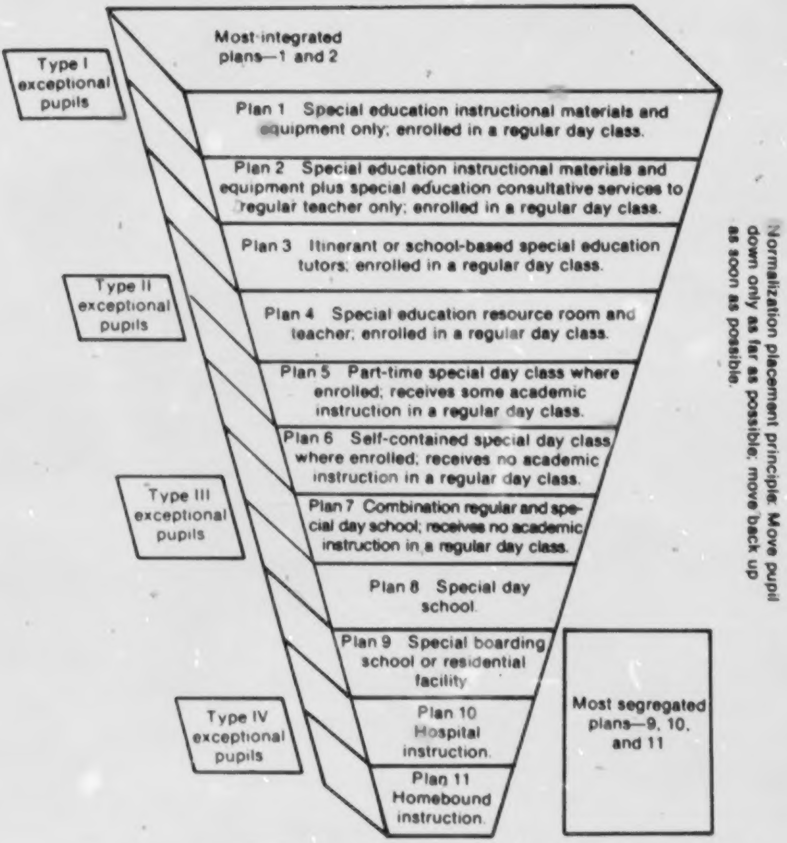
Most-integrated plans—1 and 2
Type I exceptional pupils
Plan 1 Special education instructional materials and equipment only; enrolled in a regular day class.
Plan 2 Special education instructional materials and equipment plus special education consultative services to regular teacher only; enrolled in a regular day class.
Plan 3 Itinerant or school-based special education tutors; enrolled in a regular day class.
Type II exceptional pupils
Plan 4 Special education resource room and teacher; enrolled in a regular day class.
Plan 5 Part-time special day class where enrolled; receives some academic instruction in a regular day class.
Plan 6 Self-contained special day class where enrolled; receives no academic instruction in a regular day class.
Type III exceptional pupils
Plan 7 Combination regular and special day school; receives no academic instruction in a regular day class.
Plan 8 Special day school.
Plan 9 Special boarding school or residential facility
Type IV exceptional pupils
Plan 10 Hospital instruction.
Plan 11 Homebound instruction.
Most segregated plans—9, 10, and 11
Normalization placement principle: Move pupil down only as far as possible; move back up as soon as possible.

Figure 1.2 Dunn's Inverted Pyramid Model of Instruction for Exceptional Pupils

The model displays 11 major administrative plans in special education, from the most integrated to the most segregated, and from those that should serve the greatest numbers of pupils to those that should serve the least, classified for four types of exceptional children.

Note: Plan 7 could shift up one category to serve Type II exceptional pupils when such children receive part of their academic instruction in a regular day class setting, as they often do.

From: *Exceptional Children in the Schools* (second edition) by L. M. Dunn. Copyright 1973 by Holt, Rinehart & Winston. Reprinted by permission.

application but which combines direct and indirect services. It is less comprehensive in that it is intended primarily for the mildly to moderately handicapped. It also is restrictive in the range of options, since it does not include provision for special class placement, special schools, or other segregated options frequently used for the more severely handicapped.

Chaffin refers to his model as the *full-service education model* and defines full-service education as: "providing every child—gifted, average, and handicapped—with a highly individualized education program appropriate to his/her social, physical, and academic needs. Educational services are arranged in a hierarchical fashion so that they are commensurate with each child's development." Chaffin's service delivery model was developed in cooperation with a local district and employed in an elementary attendance center during its experimental stages. It was based on four objectives:

1. To provide instructional support to the regular classroom teacher;
2. To allow design of services at the building level by those who will implement them;
3. To serve the child and his or her teacher in the regular classroom, not outside of it;
4. To protect the rights of the child through an instructional-based diagnostic system and periodic review of his or her placement.

A review of the service hierarchy displayed in Figure 1.3 illustrates the emphasis on instruction rather than on placement settings. Chaffin's *basic assumption is that primary placement for the mildly handicapped is in the regular class*. This explains why the special class does not appear as a major option in the model.

Service options in Chaffin's full-service model are differentiated as *direct* or *indirect* services. Indirect service options are limited to services provided by personnel supporting the regular classroom teacher. In other words, services are not provided directly to the child but rather to the child's teacher, in an attempt to help the teacher meet the child's instructional needs. Direct services involve interaction directly between support personnel and the child. For example, the speech clinician may deliver speech therapy to the child as a direct service. The speech clinician also might work with the teacher on techniques which the teacher would apply in class as an indirect service.

Chaffin's definitions of service options are:

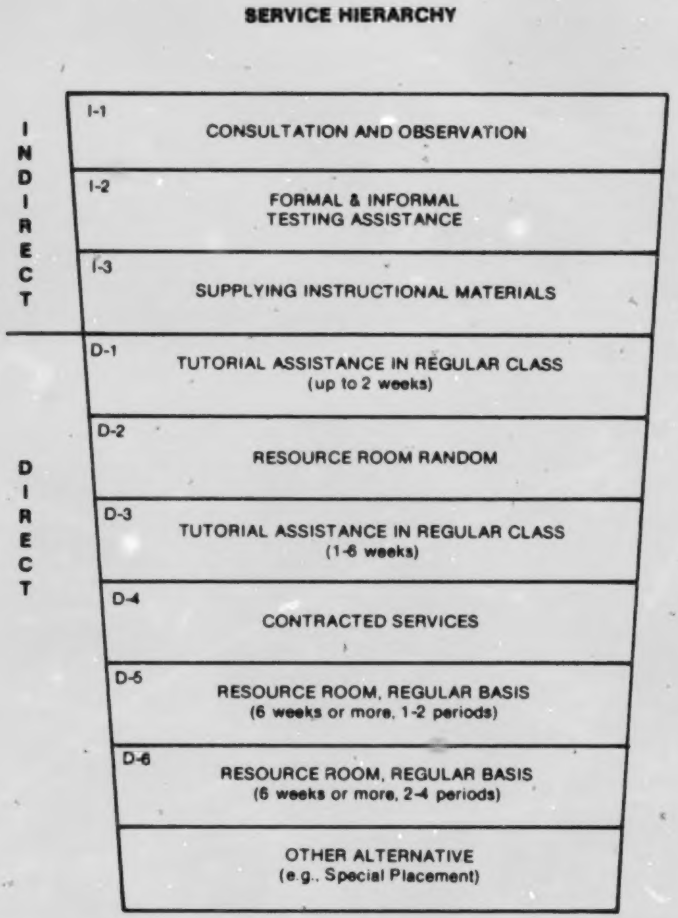
SERVICE HIERARCHY
INDIRECT
I-1
CONSULTATION AND OBSERVATION
I-2
FORMAL & INFORMAL TESTING ASSISTANCE
I-3
SUPPLYING INSTRUCTIONAL MATERIALS
DIRECT
D-1
TUTORIAL ASSISTANCE IN REGULAR CLASS (up to 2 weeks)
D-2
RESOURCE ROOM RANDOM
D-3
TUTORIAL ASSISTANCE IN REGULAR CLASS (1-6 weeks)
D-4
CONTRACTED SERVICES
D-5
RESOURCE ROOM, REGULAR BASIS (6 weeks or more, 1-2 periods)
D-6
RESOURCE ROOM, REGULAR BASIS (6 weeks or more, 2-4 periods)
OTHER ALTERNATIVE (e.g., Special Placement)

Figure 1.3 Chaffin's Full-Service Education Model

From: "Will the Real 'Mainstreaming' Program Please Stand Up! (Or . . . Should Dunn have Done It?)" by J. D. Chaffin; in *Alternatives for Teaching Exceptional Children*. Copyright 1975, Love Publishing Company.

Indirect Services

I-1 Consultation and Observation: At this level of service it is assumed that the support persons have experience and knowledge which may be valuable to the regular teacher in working with children in the classroom, followed by suggestions of procedures or resources that are available to the teacher. The important concern at this level is that the help needed by regular classroom teachers comes from the experience of the support person.

I-2 Formal and Informal Testing Assistance: At this level the support person provides assistance to the regular classroom teacher in conducting the formal or informal testing that may be necessary to plan a program for the referred student. The support person does not work with the child at this level. Instead, the support person furnishes test materials or suggestions of informal means of assessment that provide both the teacher and the support person helpful information about the child.

This level of support is intended to help the regular classroom teacher become a better diagnostician. When the teacher has obtained results of the testing, he or she communicates the results to the support person for help in program planning. This level of service is further differentiated by the amount of help the regular classroom teacher needs to administer the tests.

I-3 Supplying Instructional Resources: When the teacher and the outside support person have agreed on an instructional plan, the teacher may need assistance in locating and using the recommended resource materials. This level of support is different from I-1 in that the resource person obtains or provides explanations regarding the use of material. This level is different from I-2 in that it involves instructional rather than diagnostic resources. If a demonstration of resource material with the child is required to help the teacher implement the program, the level of service is not I-3 but, instead, a form of direct service as described below.

Direct Services

D-1 Tutorial Assistance in Regular Class (up to 2 weeks): This level of service provides for the support person to work directly with the student in the regular classroom. This service varies as a function of the needs of the child and the regular classroom teacher, but could include formal or informal evaluation, skill training in an instructional area, or helping the student learn to use prescribed resource materials. This level of service is intended to assist the regular classroom teacher in implementing a program for the student that then is continued by the teacher. Service to the child at this level is limited to approximately two weeks.

D-2 Resource Room Random: At this level of service, the *emphasis is on one specific task*. The classroom teacher sends the student to the resource room for help that cannot be provided at that particular time by the classroom teacher. This is not a continued service and is completed when the student leaves the resource room.

D-3 Tutorial Assistance in Regular Class (1-6 weeks): This level of service is different from D-1 primarily in the length of time allowed for assistance by the outside resource person. This level also is different from D-1 in that D-3 services *may involve three or more children*, whereas D-1 probably (though not necessarily) involves only one or two. As in D-1, this level of service intends that the tutorial service be maintained in the regular classroom instructional program. If it becomes apparent during this level of service that some kind of long-term support is needed to maintain the child in the regular classroom, the outside support person begins to arrange for D-4 services.

D-4 Contracted Services: This level of service can be implemented at any time during D-3. The support person and the classroom teacher evaluate (during D-3) the duration of tutorial services needed. If services in the classroom are needed for an extended period, the support person locates and trains a tutor to carry out the program.

D-5 Resource Room, Regular Basis (6 weeks or more, 1-2 periods daily): This level of service is used only when a combination of D-3 and D-4 is inadequate for instruction needed by the student. Rarely is this level used without first implementing lower level services in the classroom.

D-6 Resource Room, Regular Basis (6 weeks or more, 2-4 periods daily): Service at this level is the highest level provided within the school. Direct referral is not made at this level, but is preceded by referral to other levels of service.

Adelman's Instructional Model

The current emphasis on design of delivery system models has resulted in more attention being given to instructional models. Adelman's work is particularly significant in this area. Adelman (1970-71) has proposed a model which addresses the question of how teachers should approach instructional problems. His model differs from those previously discussed in that the emphasis is not on a service delivery system but on instructional options available to the teacher regardless of the educational setting. Changes in the learner instructional setting are considered, but primary attention is given to the instructional *process*. In terms of instruction, Adelman's model is compatible with the inherent philosophy and practices of Deno's, Dunn's and Chaffin's service delivery models.

Adelman's model evolved from instructional concern about groups of learners classified as learning disabled, emotionally disturbed, and educationally handicapped. His behavioral classifications make the model highly applicable to most levels and areas of the handicapped. Children with learning problems are classified according to three types:

Type I: No disorder (problem results primarily from deficiencies of the learning environment)

> **Type II:** Minor disorder (problem results from deficiencies in both the child and the learning environment)
>
> **Type III:** Major disorder (problem results primarily from the child's deficits)

Such a classification system clearly acknowledges the significant differences within groups of children labeled as learning disabled, emotionally disturbed, or educationally handicapped. The heterogeneous characteristics of groups of handicapped children are important in placement and instructional decision making.

Adelman argues that a given youngster's success or failure in school is a function of the interaction between that student's strengths, weaknesses, and limitations and the specific, classroom-situational factors encountered, including individual differences among teachers and differing approaches to instruction. From this logic, Adelman developed the following position statement basic to his model.

> The greater the congruity between a youngster's characteristics and the characteristics of the program in which he is required to perform, the greater the likelihood of school success; conversely, the greater the discrepancy between the child's characteristics and the program characteristics, the greater the likelihood of poor school performance.

Using the three-type classification system and the perspective of interaction between learner characteristics and classroom situational factors as the causality factor of learner success or failure in school, Adelman provides a model identified as *Sequential and Hierarchical Teaching Strategies for the Remediation of School Learning Problems.* Through the model (see Figure 1.4), he offers a two-step process to assist teachers in identifying and remediating learners' instructional needs.

An explanation of Figure 1.4 is quoted from Adelman (1970-71):

> Essentially, a two-step sequential process is suggested, by which the teacher (1) establishes a personalized learning environment and then, if necessary, (2) employs up to three sequential and hierarchical remedial strategies in a sequence predetermined by the success or failure of each attempted strategy. That is, after the first step has been initiated, the teacher proceeds to the second step, for those youngsters who continue to manifest occasional to chronic learning difficulty. The three sequential and hierarchical strategies included for possible use during this instruction of prerequisites needed before school subjects can be mastered. Level A emphasizes maintaining the focus on basic school subjects. Level B emphasizes instruction of prerequisites needed before school subjects can be mastered. Level C attempts to deal with any pathological behaviors or underlying process deficits that may interfere with school learning.
>
> No formal tests are employed to specify the etiology or level of remedial needs; assessment procedures are employed only to determine instructional needs at a particular step and level. In effect, both the youngster's type of learning problem and

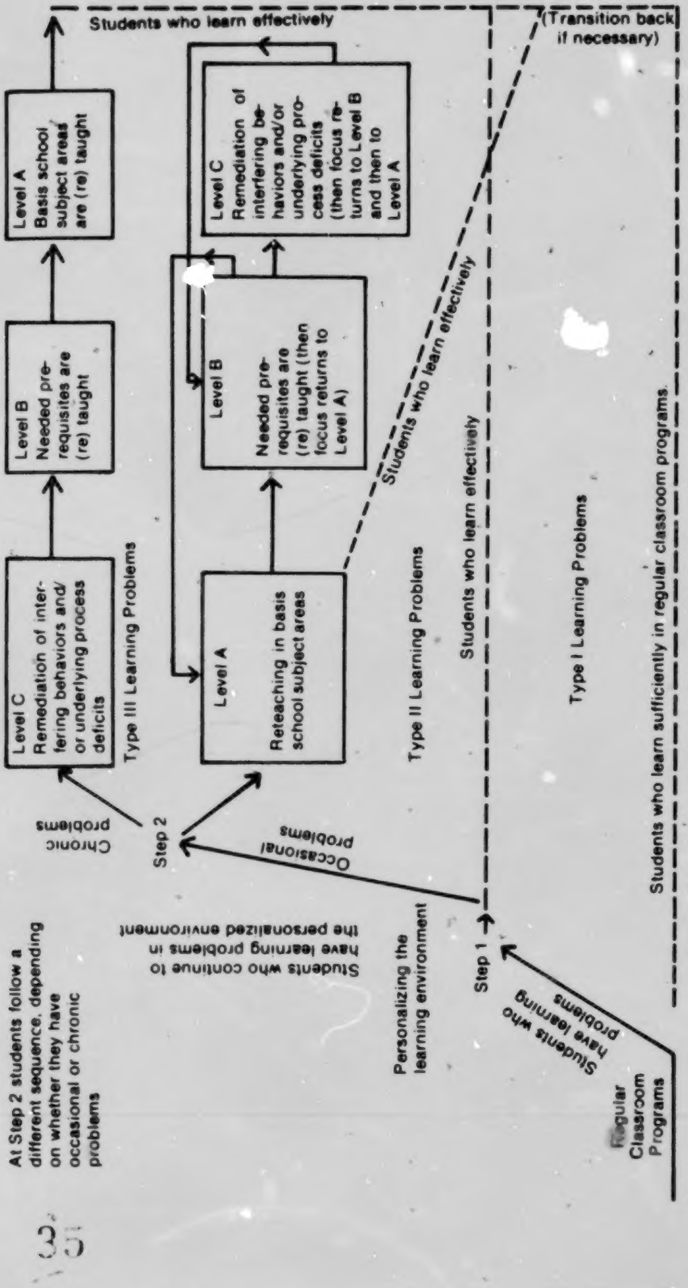
Students who learn effectively
Level A
Basis school subject areas are (re) taught
Level B
Needed prerequisites are (re) taught
Level C
Remediation of interfering behaviors and/or underlying process deficits
Type III Learning Problems
Level C
Remediation of interfering behaviors and/or underlying process deficits (then focus returns to Level B and then to Level A)
Level B
Needed prerequisites are (re) taught (then focus returns to Level A)
Level A
Reteaching in basis school subject areas
Students who learn effectively
Type II Learning Problems
Students who learn effectively
(Transition back if necessary)
Type I Learning Problems
Students who learn sufficiently in regular classroom programs.
Chronic problems
Step 2
Occasional problems
At Step 2 students follow a different sequence, depending on whether they have occasional or chronic problems
Students who continue to have learning problems in the personalized environment
Personalizing the learning environment
Step 1
Students who have learning problems
Regular Classroom Programs

Figure 1.4 Sequential and Hierarchical Teaching Strategies for the Remediation of School Learning Problems

From: "*Learning Problems, Part I: An Interactional View of Causality*" by H.S. Adelman, *Academic Therapy*, 1970-71, *6*(2), 117-123. Reprinted by permission.

> the level of remedial needs are identified only after the impact of each teaching strategy becomes apparent. What is being suggested here is that the approaches be employed systematically.

Adelman's model provides an additional resource for educators responsible for designing instructional programs for exceptional children. Combined with the service delivery models of Deno, Dunn, or Chaffin, local districts have a base from which they can systematically design programs and instructional procedures focusing on service options as well as instructional processes. The models in themselves do not provide direct solutions to instructional problems presented by exceptional children, but they do provide a construct from which teachers, administrators, and support personnel can work to resolve such problems.

The emphasis on delivery and instructional models in this chapter reinforces the need for conceptual planning and illustrates the progress made in preparation planning. This does not suggest that the models discussed are sufficient, but they do provide direction for local districts as they respond to emerging federal and state legislation. The models also provide a basis from which research questions can be generated. This is particularly true of Adelman's model.

With the evolvement of instructional options designed to meet the varying needs of exceptional children and the employment of due process safeguards, administrative procedures of the past no longer are sufficient. Attention must be given to determining the exceptional child's educational needs as a prerequisite to considering available options. After the student's needs have been determined, the emphasis should shift to providing assurance that the needed services are provided. This provision may involve developing services not currently available or contracting for such services with private or public agencies.

Following the progress of the past 10 years in design of materials and development of instructional technology applicable to teaching exceptional children, districts need to construct or adopt models which provide a reference in program decision making pertaining to exceptional children. Such models, plans, or constructs must focus on both instructional and placement decisions.

DEFINITIONS AND CLASSIFICATIONS

In the past, special education literature has given considerable attention to the process of defining exceptionalities. Recently, however, the emphasis has shifted from developing definitions to focusing on the consequence of applying definitions to exceptional children. The same issues that contributed to the need for PL 94-142 can be attributed in part to the role definitions have played in educational programming for the handicapped.

In the history of general education, a developmental perspective has been possible; so third graders, fourth graders, or "normal" children do not have to be defined as such to be taught. In contrast, for the exceptional child, definitions have become central to educational placement and, in turn, to designing instructional activities. The importance placed on definitions derives from explanations which on the surface appear logical. Under careful scrutiny, however, one realizes that little has been gained from the process—at least from the perspective of improving instruction for exceptional children.

These "logical" explanations include the premises that:

1. Definitions are necessary as a basis for differentiating learners whose characteristics dictate particular instructional approaches; and
2. Definitions are necessary as a basis for communication among personnel who provide various services required for exceptional children.

These explanations are defensible. One must be able to identify learners whose learning and behavioral characteristics require differentiated instruction. Also, participants in a learner's educational program must understand the terminology used to describe the learner. What has occurred in the history of providing special education services, however, has been a compromise in the use and formulation of definitions. For example, as public schools began to develop special education services, they found eligibility criteria necessary, and definitions became the route whereby children were determined eligible or ineligible for a particular service. State laws and regulations used definitions as a basis for approving programs and children for placement in programs. The typical approach involved stating a general definition of exceptional children, accompanied by more specific definitions for each categorical area of exceptionality served by the public schools.

CHANGING PATTERNS OF ADMINISTRATIVE ARRANGEMENTS

The administrative arrangements for special education in most schools of the nation well into the 1960's and even into the 1970's, in many places, can be described in terms of the "two box" theory. From this point of view, in local school buildings there are two kinds of classrooms (regular and special), two general classes of children (regular class children and exceptional children), and two sets of teachers (regular education and special education). In effect, two separate school systems are operated, each with its own supervisory staff and funding system.

Under the two box theory, a child who shows difficulty in a regular class is referred by the teacher to a psychologist and/or other specialist for study. If the child meets the standards for some category of special education (such standards often are defined by state regulations that specify the conditions for special categorical funding), placement is made in a special class or special school. Too often, psychological testing is the sole basis on which a final placement decision is made.

It is not unusual for a large elementary school operating under the two box theory to have perhaps 24 regular "boxes" or classrooms and 4 or 5 special "boxes" for educable mentally retarded children, learning disabled children, remedial reading cases, and Title I children (programs for children who need supplementary help in schools with a significant proportion of students from low income families). Speech and hearing clinicians and other itinerant specialist teachers may be in and out of the building for part time services to some students.

The teachers serving the special education classrooms in such schools generally receive their training in the special education departments of colleges and universities across the country, and they hold specialized certificates from state departments of education for their particular categories of competency. On the average, going into the 1970's, states offered seven or eight different kinds of special education teacher certification. Among the more common areas of specialization are: educable mentally retarded, trainable mentally retarded, speech and hearing, learning disabilities, hearing impairments, visual impairments, crippled and other health impaired, and emotionally disturbed. Of course, there

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are many variants among the categories. Depending on the state, it would be possible for a teacher to be certified to teach in such additional categories as hard of hearing, partially sighted, brain damaged, perceptually impaired, gifted, and many others.

To complete the brief story of two box organization, one must add that most of the development of this kind of organization occurred at the elementary school level. At secondary and postsecondary levels, students most often are left to sink or swim without special supports; and the story at these higher levels is told more in terms of sink than swim. In particular, students in more advanced levels of schooling have been denied opportunities, have become frustrated and have withdrawn, and, in many instances, have been excluded.

The Original Cascade Model

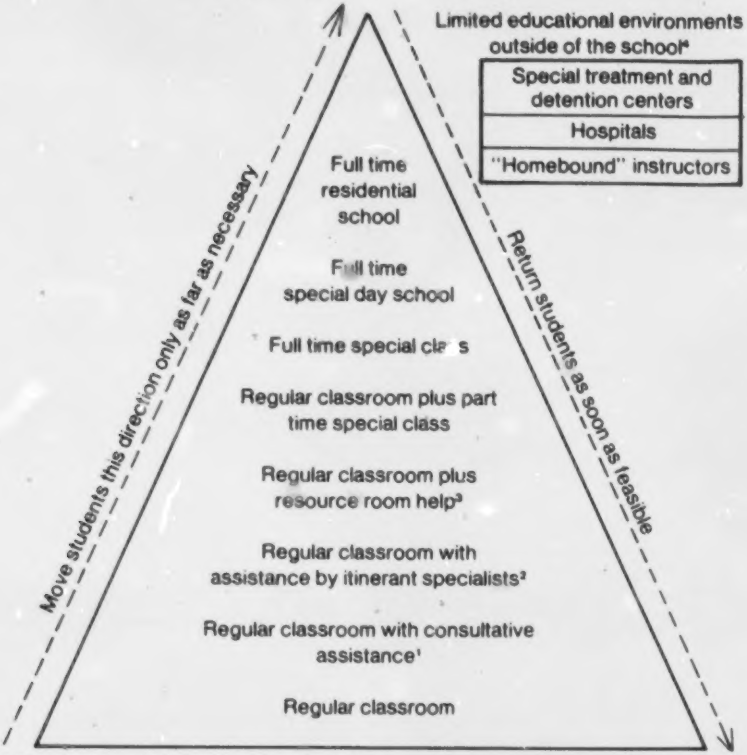
In the 1960's, a somewhat more complex administrative model for the organization of special education programs emerged. It is sometimes described as a cascade or continuum of administrative arrangements, not just two kinds of boxes (see Figure 1-1). However, it was still oriented mainly to the *places* or *administrative structures* of special education. Some distinct features are included in the model:

1. It proposed that support be given to regular classrooms as one means of meeting the special needs of the children who are maintained there.
2. It proposed that children *not* be classified and given special placements on a permanent basis but, rather, that they be moved to special stations only for as long as necessary and that they be returned to regular classrooms as soon as feasible. Thus, no indelible labels were involved. The total number of children served over time in special settings greatly exceeds the numbers served at any given time.
3. It proposed that the boundary lines between special education and regular education be renegotiated and opened so that students might pass back and forth easily, as dictated by their educational needs.
4. It proposed that regular and special education staff members become more interactive or collaborative in their daily work, such as sharing responsibilities for students, rather than to remain isolated in their separate centers and classrooms.
5. It proposed that extraordinary justification be required whenever a child was removed from the regular school environment, especially when removal was from both home and school environments for placement in a residential center.

A new teacher entering such a school system is likely to encounter a broad continuum or cascade of instructional arrangements; and college students who are preparing for work in special education under cascade

The

FIGURE 1-1
The Original Special Education Cascade


Limited educational environments outside of the school[4]
Special treatment and detention centers
Hospitals
"Homebound" instructors
Full time residential school
Full time special day school
Full time special class
Regular classroom plus part time special class
Regular classroom plus resource room help[3]
Regular classroom with assistance by itinerant specialists[2]
Regular classroom with consultative assistance[1]
Regular classroom
Move students this direction only as far as necessary
Return students as soon as feasible

[1] Consultative assistance might be offered, for example, by school psychologists, consulting teachers, resource room teachers, supervisors or others. The term *consultative* denotes only *indirect* services and no *direct* service or instruction to the child by the consultant.

[2] Itinerant specialists commonly include speech and hearing clinicians and mobility instructors for the blind, for example. They offer some *direct* instruction to the students involved.

[3] A resource room is a special station (classroom) in a school building that is manned by a resource teacher who usually offers some direct instruction to selected students but also usually offers consulting services to regular teachers. Sometimes resource teachers are categorical (such as resource teacher for the blind) but increasingly resource teachers are employed for a more generic, noncategorical role.

[4] This special set of environments is included here in set-aside fashion because usually students are placed in these settings for reasons other than educational. For example, they go to detention centers on order of courts for reason of conviction for some criminal offense; or they go to hospitals or are held at home because of health problems. Special educators often work in these *limited* environments and some degree of specialization in education is required. But, in the main, there is strong preference, from an educational point of view, for return of the students to regular school environments as soon as feasible.

model conditions are likely to find the job market expanding for some of the stations of the cascade (i.e., resource teachers) and diminishing for narrowly categorical, two box classrooms.

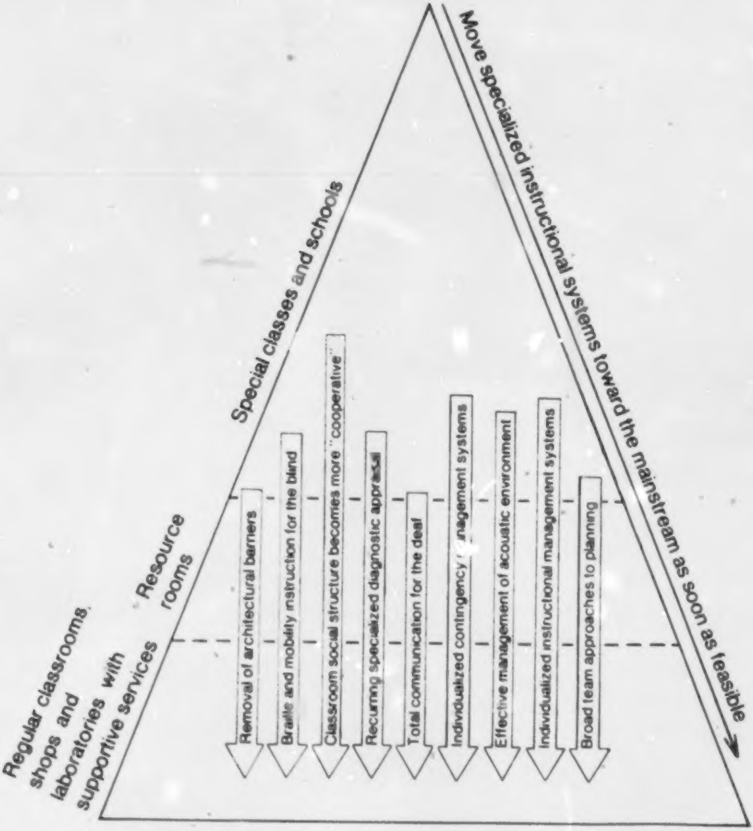
Nevertheless, the original cascade model can be subjected to a variety of criticisms. One particularly telling observation is that it is still too much "place" oriented. Although it proposed that administrative arrangements and places be conceptualized as providing variable and flexible services to students and that pupil placements within the cascade be monitored and revised as necessary, it is nevertheless true that the model put the clearest focus on administrative structures and places. The only reason for providing the diversity in administrative arrangements, presumably, is to enable the development and scheduling of instructional programs. Why not, then, develop the models and the dialogue in a way that emphasizes the instructional diversity?

This criticism of the original cascade becomes even more valid as changes occur at different administrative levels in the capacity to offer specialized instruction. What if, for example, deaf pupils could be given the specialized instruction they need in the regular school environment? Or, what if detailed diagnostic procedures could be coordinated through teaming arrangements within the regular school setting, thus reducing sharply the use of referral and special placement procedures for children who are not progressing in academics or who show behavior problems? In fact, precisely these kinds of developments are taking place now; we are learning to provide specialized instruction outside of specialized places.

Current changes can be represented schematically, as shown in Figure 1-2. Diagnostic and specialized instructional procedures are coming down to the regular class base of the cascade. There is a growing recognition that not all specialized instruction needs a special place and, in fact, that it is likely to be disadvantageous to confine children in special places or limited environments for long periods of time.

Specialists tend to design environments that only specialists can manage. Thus, specialized teachers of hearing impaired children, for example, often design educational programs that include extraordinary controls of the acoustic environment, intricate arrangements of amplification equipment, and very heavy focus on the language development problems of the hearing impaired children. Similarly, psychologists sometimes assume that teachers ought to work on a one to one basis with every child in a way that permits constant individual monitoring and only dyadic interactions. It is important for regular teachers to take a stand when such misapprehensions are aired. They should insist, of course, that children receive the intensive special help they need, but that the educational settings—both physical and social—be diverse and bear

FIGURE 1-2
Changes Occurring in the Cascade (Fewer Specialized Places; More Diverse "Regular" Places)


Special classes and schools
Resource rooms
Regular classrooms, shops and laboratories with supportive services
Move specialized instructional systems toward the mainstream as soon as feasible
Removal of architectural barriers
Braille and mobility instruction for the blind
Classroom social structure becomes more "cooperative"
Recurring specialized diagnostic appraisal
Total communication for the deaf
Individualized contingency management systems
Effective management of acoustic environment
Individualized instructional management systems
Broad team approaches to planning

some concordance with the real or ordinary situations of community life.

While specialized places may offer opportunities for intensive and specific instruction, they tend to be *limiting* in several other respects.

1. Specialized places offer limited curricula. It is unlikely, for example, that specialized classes and schools created for a category of children will be able to develop broad programs in vocational or even academic areas. The rich offerings of regular schools need to be opened as widely as possible to all children. Thus, there is strong need and pressure to create more diversity and support systems in regular school

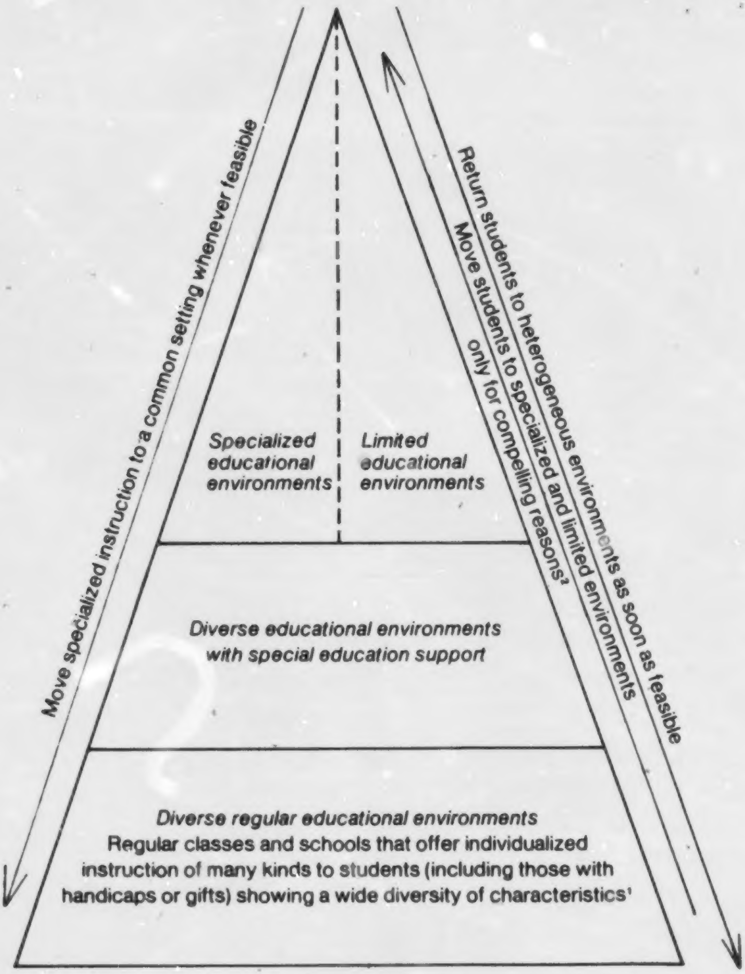
programs at all levels—preschool, elementary and secondary, vocational, and institutions of higher education—so that a full range of curriculum possibilities is available to all students with special needs.

2. Special places tend to enroll students within a limited category. For example, a setting may serve only students who are gifted, blind, deaf, disturbed, or pregnant, and so on. This limitation restricts models of behavior, opportunities for friendships, and the awareness and appreciation of diversity, both for the students in the category and others.
3. Systems for the narrow categorical placement of students in specialized environments lead to oversimplified public dialogue and social policy development. Categories of children tend to become hardened and the categorical group characterization becomes stereotyping, which leads, in general, to poor quality planning and programing. There is little chance for the appreciation of diversity to develop among students unless they experience diversity. If school environments tend to allocate children by category narrowly and rigidly, then distrust, misunderstanding, and fear of the children can be expected as outcomes because no basis for mutual understanding and appreciation has been provided.
4. Sometimes, of course, special places totally fail to offer the intensive or specialized education they are intended to offer, and the results are only watered down curriculum and lowered expectations.

New Perspective on the Cascade Model

A new perspective on the cascade is proposed as a way of conceptualizing preferred practices for the future (see Figure 1-3). It proposes that regular classes be made more educationally diverse, which would diminish the need to develop and use separate specialized educational environments. Regular schools and classes should have diversified staffing and should offer many forms of individualized instructional programs so that a great variety of students could be accommodated there with good results. By such a policy, regular school spaces would be treated acoustically and employ amplification devices, for example, so that pupils with limited hearing could be instructed in the regular spaces and still use their hearing maximally. Such spaces would have a variety of learning centers, equipment, facilities, and materials to serve students with special needs and preferences. Regular teachers would be challenged to become broadly resourceful in managing the diverse environment and serving the broad range of needs of a diverse student population. Special educators and other professionals with highly specialized knowledge and skills would be employed in collaborative teaching and supportive roles with regular teachers.

FIGURE 1-3
The Instructional Cascade


Move specialized instruction to a common setting whenever feasible
Return students to heterogeneous environments as soon as feasible
Move students to specialized and limited environments only for compelling reasons[2]
Specialized educational environments
Limited educational environments
Diverse educational environments with special education support
Diverse regular educational environments
Regular classes and schools that offer individualized instruction of many kinds to students (including those with handicaps or gifts) showing a wide diversity of characteristics[1]

[1] It is assumed that no educational "place" is impervious to change and development and that through good efforts many of the varieties of specialized and intensive forms of education can be moved into a developing mainstream.

[2] Here, as in the case of the original cascade, it is assumed that students should be removed from the mainstream only for limited periods and compelling reasons, that when in specialized and limited environments their progress snould be monitored carefully and regularly, and that they should be returned to the mainstream as soon as feasible.

The instructional cascade puts first priority on moving the various forms of specialized instruction into regular school structures. There would remain (see the top part of the schema in Figure 1-3) some separate specialized and limited educational environments. Examples of the separate specialized environments that might be included are:

1. Broad psychiatric treatment/ educational settings used for periods of especially intensive help to selected students.
2. Special settings for intensive treatment/education dealing with severe motor problems.
3. Settings in which profoundly and severely multiply handicapped children are offered a totally specialized curriculum.
4. Settings that are constructed for maximal efficiency in acoustic management and amplification for the intensive education of hearing impaired students.
5. Special classes for the intensive education of children who are simply floundering in or are unresponsive to regular school environments.

In the instructional cascade both specialized and limited programs have been included (see the upper portions of the schema). Children are moved to specialized environments only for educational purposes. In the case of limited settings placements often are made for reasons other than optimizing education. In the schema representing the original cascade, a small offset section describes these programs. Included are detention centers, hospitals or other medical settings, and homes. Children are placed in or confined to such settings, not for educational reasons, but because they are ill, have broken the law, or have severe mobility limitations. Occasionally, children are still confined, or set aside, in limited settings because of presumed moral failures (e.g, pregnant girls or drug addicted youth).

Special educators often administer programs in such limited settings, but the settings are not necessarily specialized in the sense that is proposed in the instructional cascade. Many children in those special locations really need only regular education; they are there for other reasons. In general, educators assume that the placement of students in limited environments—limited both socially and physically—ought to be held to an absolute minimum. Of course, no matter how long the children must be confined to such places, their education still needs careful attention. In Figure 1-3 limited settings are included within the general cascade arrangement, suggesting that educators ought to be involved in placements in detention centers and similar settings to ensure appropriateness of education and to achieve careful coordination with other school programs. There is much need for developmental work to improve educational offerings in the home, at the bedside, and in detention

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centers. A child who lacks opportunities and support for development is denied a sense of the future; children in these limited settings too often have little reason to feel confident, optimistic, and hopeful as they look to the future.

In Odessa, Texas, a collaborative effort was initiated by probation officers, a county judge, and school administrators to create facilities and programs by which youth who had broken the law and were "incarcerated" in the local jail could receive appropriate education. A plan was devised to bus students from the jail to a community setting in which a comprehensive educational program was available. Through broad cooperation between county and school officials a major vocational training unit was added to the school. More than a third of the students in the facility were reported—in 1976—to be those who had been in difficulty with the law, but who nevertheless were in a broad-based school program. (See Dial, 1977).

The general attitude or view taken here is that all students should begin their formal education in regular classes, with the special help they need first brought to them there, and should be moved to specialized and limited settings only after thorough and comprehensive trial in regular classes and only for compelling reasons. If placement in specialized settings is necessary, the children should be returned to the mainstream as soon as feasible.

It is doubtful if present day assessment procedures are, on their own, able to indicate with sufficient certainty that children will need to be educated outside the mainstream. Actual experience, first, in an integrated setting is necessary before that determination can be made. Strong efforts should be made to build appropriate instructional capacity into the mainstream for every child possible, thus limiting extrusions to other settings and hurrying the return of those children who are removed from the mainstream for any period of time.

A particular difficulty exists, of course, when an educational environment is both specialized and limited. For example, if a residential school enrolls only deaf children and offers instruction by specialized methods in only limited specialized domains, it is a doubly homogeneous environment and is poorly equipped to prepare students for open community life. Similarly, a juvenile delinquent who lives only with other delinquents and receives an educational program that is very limited in range, is also in a highly homogeneous and, in this case, a potentially damaging environment.

It is strongly desirable for children who live overnight in institutions to be moved into broad, community based, daytime educational programs so that they can experience as fully as possible the richer diversity of students and programs available in the community. See, for example, in Chapters 6 and 11, the ingeneous solutions to these two problems implemented by the Lexington School for the Deaf and Western State School and Hospital in Pennsylvania. Similarly, if students need, for a period of time, highly specialized educational environments that are not available within reasonable transport from their homes, perhaps small group homes for them should be developed in the communities that offer a wide range of educational environments and instruction.

The courts and Public Law 94-142 posit the general principle that children should be educated in the *least restrictive environment*. The education must also be *appropriate*. The regular class in the neighborhood school is presumed generally to be able to supply both, if properly planned, staffed, and equipped. The least restrictive environment that is appropriate for a particular pupil's education may, for a time, require part time instruction in a resource room or even full time instruction in a special class. Plans for every individual must meet both tests, that is, be appropriate and in the least restrictive alternative.

The instructional cascade proposal entails several broad policies that are listed here; they are discussed in greater detail in later chapters of this book. The instructional cascade proposes:

1. A decentralization policy—to develop the capacity to conduct specialized forms of education in many settings, rather than in a few.
2. A "give away" policy for educational specialists, that is, the willingness to teach aspects of their specialties to less specialized professionals and sometimes to aides and to parents.
3. A joining of responsibilities for assessment, planning, and instruction in a single setting, as opposed to a policy of referral to special centers for child study and prescription.
4. Descriptions of students that are made mainly in terms directly relevant to instruction, rather than in terms of abstract categories, such as *retarded* or *disturbed*.

MAINSTREAMING IN THE BROADER COMMUNITY

The changes occurring in educational programs for exceptional children are part of a more comprehensive set of changes. They are broader than special education. The court orders and emerging legislation articulate new imperatives for general superintendents and boards of education, not just special education departments. What they direct is not just a minor in-housing reordering of special education programs but a general reordering of total school systems—the ways children are assessed, assigned, and served. The same kinds of changes can be seen in other forms of service as well.

In mental health, for example, many of the clinicians (psychiatrists, clinical psychologists, and social workers) have abandoned their special enclaves and function within the context of the community. Instead of working directly and solely to "fix" or "cure" the individual who comes to them with problems, their energies have turned to providing environmental supports for that person. Employers, wives, children, neighbors, storekeepers, and clergy are enlisted to build support systems to maintain the individual in familiar surroundings.

The diagnostic studies required in this broad context extend beyond the individual's immediate condition to his total life situation. The treatment that is prescribed is also directed to the total situation, that is, directed to all relevant elements of the person's life setting. In the process of such work, the professionals work within a framework of community relationships that they turn to preventive and therapeutic purposes. And so it is in the schools.

Restrictive boundaries are eroding outside the realm of professional services as well. In one large city, for example, handicapped persons have banded together to press for better services by the city bus system. Persons with motor handicaps often are not able to board the buses in the quick style required, and those in wheelchairs may be totally immobilized by the public transportation system. They want lifting devices to help take wheelchairs on board the buses. The bus company has offered to send special minisize "handicabs" for them, but the handicapped persons have insisted on being mainstreamed, that is, being able to use the bus system. And so it is in the schools.

At the 1976 Convention of the American Association for the Advancement of Science (AAAS), another example of broad changes was evident. Even before the convention was committed to the city of Boston, clearances were obtained to assure all handicapped scientists who attended the convention that they would have full access to all sessions and that all hotels and other meeting places would have external and internal ramps to permit scientists in wheel chairs to move readily to all sessions, restaurants, restrooms, and hotel rooms. It meant also that the special symphony concert for convention registrants was held in a hall with appropriate ramps. Deaf scientists attending convention sessions were provided with interpreter services in the preferred communication mode; and, whenever feasible, blind scientists received advanced manuscripts of presentations that used visual aids. During the convention, 400 handicapped scientists met to help map strategies to permit all scientific meetings to be mainstreamed, that is, to determine how special services can be provided, not in set-aside stations, but in the mainstream of conventions. The AAAS has published a guide for use by other associations in arranging barrier free meetings (Redden, 1976). Handicapped persons want full entry, opportunities, and participation in all mainstream activities.

A further example of what is happening in communities is the widow to widow program. In the grief in the wake of the death of a husband, many widows are turning to networks of other widows for help; there they find immediate understanding relationships and support that are far different from the services available from the clinical psychologist or psychiatrist. Indeed, such professionals increasingly find themselves involved in creating and supporting networks for mutual help among widows. Thus the specialist is less involved in direct services to a particular clientele and more involved in changing and developing community structures to serve persons with special needs. In such a process, the psychiatrist and psychologist find themselves engaged in the indirect processes of helping broad groups of helpers to help, rather than in helping directly a limited number of clients at very high cost. They "give away" some of their special insights and skills and take on an indirect support role rather than a direct service role. And, again, so it is for many specialists in the schools. In many communities mental health-mental retardation councils or planning bodies have been formed to help construct the broad, integrated programs required in a "full service" era.

One of the reasons for these changes is the sheer impossibility of providing specialized help in one to one treatment situations for all individuals who have specialized needs. There is little chance of providing all the manpower that would be needed to deal individually with all learning and adjustment problems if services are provided only by specialists working in specialized environments; and it is doubtful that the nation could afford such services even if the specialized manpower problems were soluble. But beyond economics and manpower problems, it seems clear that developments in mainstream settings that lead to the appreciation of diversity and its accommodation in treatment are vastly to be preferred, on qualitative grounds, to referral to segregated settings.

How Many Exceptional Students?

How many students are exceptional? How much program are we buying in the name of special education? Visits to different school systems would probably lead to a variety of answers. In one major city, for example, estimates of special education services result in five different answers to the first question.

1. 5%—About 5% of the students have received one or more types of special services regularly for the entire school year. Included in this group are profoundly and multiply handicapped students, young students who receive daily instruction in braille or other highly specialized subjects, and some particularly vulnerable or fragile students who have needed rather protracted help in a specialized environment.

2. 10%—About 10% of the students receive specialized assistance on any one school day. This estimate includes the 5% who receive services in year long programs. The other 5% is made up of students who receive only short term or occasional help from specialists such as speech therapists, resource teachers, or others.
3. 20%—About 20% of the students receive some kind of special service over the period of a school year under the same conditions as the 10%. The 20% figure simply includes all of the students who receive service over a year. Obviously, the identificiation of exceptional students is not a one time operation. To provide 10% of the students with some form of special services on the average school day, the schools actually serve some 20% of the total student population in a given year.
4. 40%—If students were followed from kindergarten through grade 6, how many would be found to need at least brief periods of speech therapy or crisis intervention for an emotional problem, or display distinct learning or behavior problems, or need to repeat a full grade? In one of the few studies available to answer this question (Rubin & Balow, 1971) it appears that about 40% of elementary school children may need a special service at some time.
5. 80%—Professors Rubin and Balow (1971) have now extended their longitudinal study into secondary school years, reporting informally that the percentage of children needing specialized assistance at some time in their public school experience continues to rise beyond the 40% level.

Returning to the question of how many exceptional children there are, we can see that the answer is complex. In general, special educators consider themselves responsible for about 10% to 12% of all children. Many states have been quite willing to fund special education programs at that level. Sometimes, that percentage is broken down into categories, with speech correction and educable mental retardation, for example, each credited with 2 out of every 10 exceptional children; but for modern, dynamic educational planning it is no longer very helpful to think in terms of a static set of children at the 10% to 12% level that can be distributed among subsets by traditional categorical labels. The Rubin and Balow (1971) studies make that plain. The facts and the bases of the rationale for specialized programs requires more openess to a changing and larger set of students.

The Legal Base

Traditionally, the operations of schools have been determined by local and state initiative. The fundamental obligation to offer educational opportunities to children rests at the state level. Most state constitutions contain language requiring the operation of a "general and uniform" school system; the language varies but the intention does not. For some years, school buses have been rolling over the most isolated mountain roads and across swollen streams to find every "normal" child and to see that pupils get to school.

In spite of long standing laws requiring local school districts to provide education for all children and to compel all children of certain ages to attend the schools provided, in the past various categories of children have been excused or excluded from the schools and many school authorities have felt quite free to expel for any reason individual students who were troublesome or difficult. Few people noted that the so called compulsory school attendance laws were generally not being administered with vigor and, outside of the immediate families, the demissions of individual children also went largely unnoticed. The situation was such that in most communities no one really knew how many children were out of school. In large cities, where mobility of families is high, the situation was even more difficult to assess.

Radical changes in demissions have been occurring, however, in part because of the activities of students themselves. They have become too aware of their rights to be denied valuable educational opportunities by arbitrary procedures. Lawyers, often supported by organized groups of parents and service organizations, have been eager to press cases for individual students; and professionals who, from various points of view, see the rights of individual students as fundamental to a democratic society and surpassing in importance all rights and conveniences of institutions, have added their weight. In addition, legislators have removed categorical bases for the demission of children from schools, such as the repeal of laws allowing the exclusion of the trainable retarded, thus forcing the schools to deliberate each proposed admission or demission on an individual basis.

Recently, state legislatures and the US Congress, most notably with Public Law 94-142, have taken the situation to the ultimate position. It has been made abundantly clear that every child has a constitutional and lawful right to education and that it is the obligation of the local district to provide the education, preferably within its own school system or, if not, then by special arrangements with other districts or agencies. The fundamental expression of this right is found at the constitutional level in the equal protection clause of the 14th Amendment.

Educators are enjoined not only to enroll literally all children who are presented to the schools but to actively seek out all children, through census and special finding procedures for those with special needs and to insure their enrollment in appropriate school programs. Categorical exclusions from school are illegal. The difficult problems of individual pupils must be dealt with in accordance with principles of due process, not in class or categorical procedures; if demission from the school is directed, special arrangements for out-of-school education must be provided. The effect of these policies and legal requirements is to harden the compulsory attendance laws, to safeguard at the highest levels the right of each student to appropriate education,and to add force for the reorganization of the schools so that individual needs become a paramount concern.

CONCLUSIONS

New imperatives, judicial and moral, make more inclusive arrangements for schooling a necessity. What one might speak of as the era of mainstreaming, least restrictive alternative, progressive inclusion, or integration is a further advancement of a long trend in American education. The movement can be seen as advance beyond the two box theory of treatment in which a person is either normal and law abiding and needs no special treatment, or is sick, poor, disturbed, asocial, or old and therefore institutionalized for treatment and care.

What is required is that the regular school environments be transformed to provide for a greater diversity of students and instructional offerings. Following such developments it will become increasingly unnecessary to displace some students to specialized and limited environments. Such specialized and restrictive environments have enormous limitations both in their immediate services and in their longer range implications for the students involved. It is anticipated, of course, that not all students will be well served in mainstream settings; thus it is expected that some specialized school programs will continue to be conducted in special classes and other special settings. But the processes that are used to place students in the special settings will need to be justified with great care. This total process of development and placement is what is meant by mainstreaming.

Obviously, the mainstream trend makes new demands on both regular class and special education teachers. The remainder of this book explicates some of these demands and the opportunities they present. Some educators may wish that special education would continue its separate status, take its exceptional pupils off to separate enclaves, and use all the special funds for the purpose, and thus leave the regular schools without this additional challenge and burden. But it is not to be so. The agenda before all educators is to create a single, unified school system that serves *all* children in the most inclusive possible ways; and that is a challenging and worthy undertaking.

SUGGESTIONS FOR STUDENTS AND INSTRUCTOR

1. Secure for review copies of state laws, policies, and regulations concerning the operations of special education programs in your state, looking particularly for implications for regular classes.
2. Invite representatives of local or state associations of parents of exceptional children to meet with you to discuss current policies, practices, and problems in implementing special education programs in your community or state. Or, attend meetings of such associations to observe their concerns and programs.
3. Seek films or slide tape modules that treat public policy topics. Information about such items is readily available through The Council for Exceptional Children, Area Learning Resource Centers, state department of education, and many universities.
4. Secure and study copies of recently published proceedings of hearings of the Congress (US House of Representatives or the Senate) on legislation relating to the handicapped and gifted. Major publications of this kind are available almost every year and may be obtained by writing to one of your congressional representatives.
5. Administer and review results on scales for measurement of attitudes toward handicapped persons and about various arrangements for the education of exceptional children. For example, try the Rucker-Gable Educational Programming Scale (1974).
6. Visit local schools and interview teachers about local arrangements for education of exceptional children, checking particularly on trends that reflect the emerging policies as discussed in this chapter. How much change in special education practices in your schools is taking place at this time?
7. Compile a directory of personnel and agencies within your schools and in the broader community that could be used to arrange for careful studies and consultation concerning exceptional pupils.
8. Prepare a list of topics you think need to be studied by regular teachers if they are to participate effectively in mainstreaming programs. Have a group of teachers respond to the list, indicating the degree of interest and commitment they have in regard to the several topics.
9. Secure the report from the Invisible College entitled *All Together Now* (Jordan, 1976) from The Council for Exceptional Children and review readings and tapes on various facets of mainstreaming. Also see Appendix B for descriptive information on other "packaged" materials for training.

Instructors may suggest that students use the topical bibliographies that follow this section, and that follow subsequent chapters, to do investigations in depth for papers and class discussions.

TOPICAL BIBLIOGRAPHIES

History and General

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Dunn, L. M. Special education for the mildly retarded—Is it justifiable? *Exceptional Children,* 1968, *35,* 5-22.

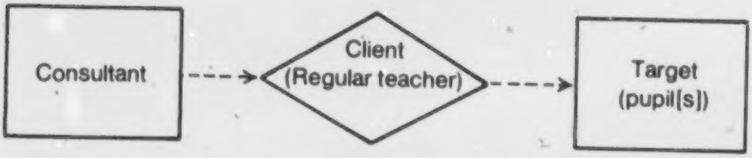
Consulting Processes: From Dyadic to Triadic Relationships

As more exceptional children are enrolled in regular classes, specialists and special educators are moving to construct support systems for such pupils. Regular teachers find themselves joined with resource teachers, psychologists, speech clinicians, teacher aides, or other adult workers in attempting to serve each student. Thus schooling increasingly involves significant adult-adult-child relationships. Instead of the relatively simple dyadic relationship of teacher and pupil, we face the triad of consultant, client, and target. The consultant may be a special teacher, a school psychologist, a school social worker, a special supervisor, an audiologist, or any one of many other specialists.

The consultant is in the indirect role, the teacher in the direct instructional role. Often, special teachers provide direct instruction as well—on special topics, such as braille, auditory training, or Gillingham reading methods—but our concern here is their functions in the indirect or consulting role. Regular teachers are now learning how to use consultants of many kinds.

Consulting, in the present context, is a temporary relationship undertaken voluntarily to help improve instruction for one or more pupils. The teacher is the client and the pupil is the ultimate target (Figure 2-1). The consulting relationship proceeds on the assumption that everyone involved is well motivated and equally dedicated to effective instruction. Often, too, they are professional peers.

FIGURE 2-1
The Consultation Triad



The following list suggests a few guidelines for regular teachers to keep in mind when they work with consultants. These suggestions have been derived from broad theoretical work and experience in consultation functions, but they seem applicable to the rapidly expanding role of the regular teacher as user of consultation (Parker, 1975).

1. Remember that the teacher "owns" the problem and is in charge of the education of the pupil or the class procedures that are under consideration.
2. The teacher should be sure that there is early agreement with the consultant on the nature of the "problem" and on how decisions about plans for solution will be made. An oral or written contract should be drawn up early in the relationship on goals, methods, and responsibilities.
3. Be sure that it is clear that the teacher is the client and that all communication flows to him/her. The consultant is there to help structure the client/teacher's work not somebody else's. This relationship does not preclude some direct assessment of children and observations in the classroom by the consultant if agreed on as part of the contract.
4. Status problems should be avoided. Consultants and clients are coequals.
5. The teacher should avoid entering personal subjective materials (letting attention shift to personal needs and problems); instead, the content of the relationship should remain centered on the child and the instructional situation.
6. The teacher should seek alternative suggestions from the consultant rather than a single or set plan.
7. Teachers should try to use each consultation as a learning experience in increasing effective communication and listening, building trust among professionals, and maximizing instructional effectiveness.
8. Each consultation experience should be evaluated objectively and the teacher's conclusions should be shared with the consultant.

WIN, PLACE OR SHOW

Directions for Instructor

Win, Place or Show is an activity intended to help the class participants understand their own attitudes (or values) toward education of handicapped children in the regular classroom (as opposed to special class or tutorial arrangements). The strength of these attitudes (or values) is also explored by considering the extent to which the individual participants influence (or are influenced) by the group.

The activity involves a number of brief descriptions of children with learning problems, and participants are required to give their estimate of the best placement option for the child on the basis of the information provided. The situations described are purposely vague, which should allow attitudes and values of the participants to play a prominent role in the decision.

First, the participants will be directed to read the instructions carefully and study the placement options. They will then make their decisions about each situation and record their placement decision in the column marked R_1. *Emphasize that in some cases the information is quite vague and remind them that their answer is only their "best estimate" of the situation as described.*

Next, without extensive discussion of the results of the previous responses, form the participants into groups of 4 or 5, and ask them to review each of the situations and *come to a group consensus regarding the best placement option*. Be sure to emphasize that the groups *should not* arrive at an "average" score for each vignette. Instead they discuss their reasons for the decision and come to some agreement. The results will be recorded in Column G.R. (Ask each person in each group to record his total score on a separate sheet of paper. While the groups are discussing each vignette the group leader should put the scores on the chalk board. Put the highest score at the top and arrange them in descending order.)

Next, again without discussion, ask the participants to *individually reconsider* their original decision and make a final decision based on the group decision and their original estimate of the best placement option. This decision will be recorded under Column R_2.

Finally, provide participants with the experts' answers: 1-5.2; 2-4.3; 3-4;6; 4-2.7; 5-4.0; 6-6.4; 7-3.5; 8-5.6; 9-3.2; 10-5.

Some questions for consideration:

1. Does your score represent your attitude toward retention of handicapped children in the regular classroom? High scores represent commitment to regular class; lower scores represent commitment to special class.
2. To what extent did your original score vary from the group?
3. Was the group decision better than individual decisions? (Compare individual and group scores with experts' score.)
4. Who seemed most influential in your group?
5. Was the person with the lowest deviation from the experts the one you picked as most influential?

6. Keviation scores on items number 1,2,4,5 and 8 can be compared with deviation scores on items 3,6,7,9 and 10. A comparison of the sum of deviations will reveal the extent to which the added extraneous information about the child's teacher influences the placement decision.

Explanation of Abbreviations

R_1 - First response to question

GR - Total group response to question

R_2 - Revised response to question

ER - Expert Response

D_1 - Difference between R_1 and GR (disregard + or - sign)

D_2 - Difference between R_1 and R_2

D_3 - Difference between R_1 and ER

D_4 - Difference between GR and ER

D_5 - Difference between R_2 and ER

WIN, PLACE OR SHOW

by
Jerry Chaffin and Norma Jean Hemphill

Teachers are ordinarily faced with a wide variety of problems arising from the many different kinds of students they work with each day. On the following pages are brief descriptions of children actually referred for special education services. For each student you are to indicate what *you* feel would be the best educational setting at this time. You would actually need more information before placing most of the students, but please make your best judgements based on the information provided. Assume that all of the programs are available and competently staffed. Also assume that placements within the continuum are flexible and that it is possible for a student to be moved up or down the scale after treatment.

Place each student in one of the seven programs from the continuum below.

REGULAR (RC) - with no basic change in teaching procedures.

CONSULTATION (CON) - regular classroom with specialists available for consultation with teacher (or parent) whenever needed.

CONSULTATION & DIRECT SERVICES (CON & DS) - regular classroom with specialists available in the school to consult with teacher and provide short-term direct services to student.

RESOURCE ROOM (RR) - regular classroom with resource room services (special education teacher providing supplemental instruction) provided on a continuing basis in which the student can participate for as much as two hours each day.

PART-TIME SPECIAL CLASS (PTSC) - student enrolled in a special class for the majority of each day, but enters regular classroom for certain subjects.

FULL-TIME SPECIAL CLASS (FTSC) - student assigned to a self-contained special class on a full-time basis.

NOT - student placed in a residential school, hospital program, treatment center, etc., because he or she cannot reasonably be handled within the context of regular or special public education.

1. Myron is a sixth grader who often becomes aggressive in class. His relationships with other children are usually quarrelsome and he is prone to get into trouble when left alone.

RC	CON	CON&DS	RR	PTSC	FTSC	Not
7	6	5	4	3	2	1

2. Ed repeated kindergarten because of his immaturity and is now having trouble doing his first grade work. If he is included in a group activity, he constantly teases the smaller children. He has to be watched constantly or he will destroy their work in a sadistic manner.

RC	CON	CON&DS	RR	PTSC	FTSC	Not
7	6	5	4	3	2	1

3. Christopher is a very articulate second grader with many interests. He works very slowly, particularly in reading. He is weak in phonetic analysis, can't seem to retain reading skills, and any academic growth on his part depends on a great deal of drill. Previous suggestions to the teacher for helping Chris have not been followed.

RC	CON	CON&DS	RR	PTSC	FTSC	Not
7	6	5	4	3	2	1

4. Leroy beat another first grader so severely that minor surgery was required. He has bitten a number of his classmates and has to be supervised constantly.

RC	CON	CON&DS	RR	PTSC	FTSC	Not
7	6	5	4	3	2	1

5. Fred is a ten year old fourth grader who was retained in first grade. His attention span is short and many of his interests are immature. His motivation for classroom work is very low, but improves markedly on a one-to-one relationship. He has difficulty with reading, spelling, and arithmetic concepts. His oral performance indicates that he is far more able than his written work would indicate.

RC	CON	CON&DS	RR	PTSC	FTSC	Not
7	6	5	4	3	2	1

6. Annalou is new to her present fifth grade class. She seems anxious while she is in school, but is much clamer as soon as she leaves the school grounds. Her schoolwork is sli;htly below average, but she is quite responsive if encouraged. Her teacher says she likes Annalou but honestly feels she needs special help.

RC	CON	CON&DS	RR	PTSC	FTSC	Not
7	6	5	4	3	2	1

7. Ray, age twelve, is a two time repeater with above average potential; he has great difficulty remembering material presented in a visual manner and, in spite of a great deal of remedial reading instruction, remains a non-reader. His teacher is convinced that he could learn if he really wanted to but insists that he just won't try.

RC	CON	CON&DS	RR	PTSC	FTSC	Not
7	6	5	4	3	2	1

8. Bob is a third grader who wants friends, but his classmates continually make him a scapegoat. Although he is apparently bright, he is very forgetful and seems unaware of what is expected by his teacher.

RC	CON	CON&DS	RR	PTSC	FTSC	Not
7	6	5	4	3	2	1

9. Virginia is an eight year old who does little work in school. She is capable of verbal and physical attacks on anyone when angry. She doesn't seem to care about any school relationships and neither threats nor praise are effective in dealing with her. Her teacher indicated that she was probably just going through a 'mean' phase and that it would soon pass.

RC	CON	CON&DS	RR	PTSC	FTSC	Not
7	6	5	4	3	2	1

10. Tom, age eight, doesn't seem to acquire new skills as quickly as most; he needs to have instructions repeated several times. He has difficulty working individually and needs a great deal of encouragement and supervision. His teacher says that she can't manage him and insists that he can be placed in a special class.

RC	CON	CON&DS	RR	PTSC	FTSC	Not
7	6	5	4	3	2	1

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* An activity modified from the Rucker-Gable Educational Programming Scale, Rucker-Gable Associates, Rockridge Box 201C, Storrs, Conn. 06268.

REFERRAL SYSTEMS

by
Mary Moran, Peggy Glazzard, and Edward Meyen
University of Kansas

With the advent of Least Restrictive Environment services, the classroom teacher must be aware of instructional modifications which (s)he can make to accommodate mildly handicapped students in the regular classroom. However, Lease Restrictive Environment services include a full range of teaching options. That is, the student who cannot be accommodated full time in the regular classroom is entitled to those services which best fit his/her instructional and social needs, whether in the regular class, in the regular class with resource assistance, or in the special class. Only by providing for such a range of needs is Least Restrictive Environment education fully met in spirit as well as in principle.

Provision of full services to handicapped students necessitates the classroom teacher's awareness of available service options and support personnel as well as procedures for referring students. Thus, it is important that a teacher know when to refer a student, how to initiate a referral, how to communicate a student's problem via the referral form and what, in general, to anticipate as the result of the referral.

Student Outcomes

Upon completion of this module the student will demonstrate familiarity with referral systems used by area school districts.

Instructor Information

Prerequisites:

While it is possible for a student to learn how a referral system operates in a district without being knowledgeable of learning and behavioral problems characteristic of students which present instructional difficulties to teachers, this instructional module will be more meaningful if the student has had a broad background in child growth and development. It would also be helpful for the student to be generally familiar with the organizational structure of school districts.

Organization:

This module is primarily activity based; however, specific class discussions are delineated within the module. The module is organized into enabling activities which include readings relevant to referral procedures, interviews with classroom teachers and administrators, and referral procedures which would be implemented for hypothetical students.

Content Overview:

The module focuses on knowledge of referral procedures in general and within a local school district and use of these procedures for referring two hypothetical students.

Suggestions for Teaching:

The instructor will find it helpful to become familiar with all recommended readings for this module in order to provide students with an overview of the activities which they will perform and to answer specific questions which might arise as students complete the activities. Teaching Time: The instructor should plan 4-5 hours for out of class preparation, individual activities, and interview time for independent student work. Two to three hours instruction should be sufficient to review readings and observations and to entertain questions or explain the assignment.

Evaluation:

Recommendations for evaluation are included in the body of this module.

REFERRAL SYSTEMS

by
Mary Moran, Peggy Glazzard, and Edward Meyen
University of Kansas

Prospectus

A referral is a procedure used by schools to obtain assistance for teachers and/or students. In a typical school district there will be an "Office of Pupil Services" which is responsible for helping teachers to obtain help for students. This is generally accomplished by informing teachers of the services available within the district and the community. Teachers are then provided an orientation on how to describe behavior and general problems of pupils as a basis for making a referral. The referral itself is generally a form completed by the teacher on which the child's problem is described. The referral form generally is a very brief form which serves to initiate a request by a teacher for assistance in helping a child. Most districts will have established procedures for processing referrals. Typically they will go to a central office. Upon receipt of the referral form, the case is assigned to a professional in a service area suggested by the referral, e.g., school psychologist, speech therapist, etc. Once this occurs, the teacher making the referral is contacted. At that time a decision may be made for testing, observation, or parent conferences. Depending on the nature of the problem, the referral may result in the child being placed in a special program, consultation being provided the teacher, or the child receiving service from a specialist.

It is important that a teacher know when to refer a child, how to initiate a referral, how to communicate a child's problem via the referral form and what, in general, to anticipate as the result of the referral.

Student Objectives

Optional Objective

1. The student will be able to identify pupil characteristics which vary from normal patterns of growth and development.

   COMMENT: It is important for the beginning teacher to realist that some behaviors of pupils are one-time occurrences, or last for short periods of time, and are not characteristic of a student. Many beginning teachers have not had sufficient experience with children to know what to expect. For these reasons a review of developmental patterns of children may be helpful.

Enabling Activities

1. Reading 1, Kirk, pp. 3-23. (On reserve in Education Library).

Evaluation: The chapter by Kirk provides a series of profiles on different types of exceptional children. By removing the identifying slides or handouts, profiles can be developed. Students may identify the type of handicapped child depicted in the profile and explain the choices. This evaluation exercise would be best handled in a small group seminar setting.

Student Objectives (cont.)

Enabling Activities (cont.)

An optional independent exercise could involve provision of a blank profile and students then draw in a pattern for designated examples of children with particular handicapping conditions. The significance of wide variance from the norm should be stressed.

1. The student will be able to describe situations in which it would be necessary for a teacher to use a referral system in order to obtain assistance in providing instruction for a child.

   COMMENT: As a classroom teacher, no one expects you to always be able to meet the needs of every student without help. However, you are expected to know when to ask for assistance. If every teacher asked for help with every minor instructional problem they encountered, more time would be spent by teachers in making referrals and by service personnel in responding to them than in teaching. It is important for you to first attempt to work through the problem. This generally involves your finding out more about the child's problem. Once you are knowledgeable of the child's problem and the situation, you are in a better position to decide whether or not a referral is necessary.

1. Reading 2, Smith, pp. 1-29. This selection presents an extensive discussion on assessment practices and the teacher's role. It requires the reader to make inferences about the time specific evaluation practices are appropriate. In reading the selection, you will want to keep in mind that your goal in acquiring additional information is to help you solve a child's problem or determine if you need to make a referral in order to obtain assistance to help a child.

2. This activity should be completed if you have access to an experienced teacher at your level of interest. Your instructor should have procedures established for contacting school personnel. If you know a teacher personally, it is best to confer with him/her outside of school time.

3. Select a teacher who is teaching in your field. Arrange to spend 10-15 minutes with him/her in an interview situation. Your goal is to find out why referrals have been made requesting assistance in teaching a child. Prior to the interview, structure four or five questions which you feel will elicit the information you need. Avoid questions which call for a yes or no response. Try to encourage the teacher to describe the child's problem and why he/she decided to ask for additional help.

Evaluation: Evaluation could entail a discussion session or a written exercise. In either situation, the students' responses should be probed to be certain that they recognize the importance of their first searching for a solution and not contributing to over referrals by asking for help when it is not necessary. A teacher should initiate referrals when:

(1) the child's problem seriously interferes with his/her performance or with the education of others.

(2) the teacher has attempted to resolve the problem but has been unsuccessful

(3) he/she is aware of specific services that would be of help

(4) he/she has ideas about how to approach the child's problem but needs evaluation information acquired through the teacher's own skills.

Student Objectives (cont.)

2. The student will be able to list the types of services a child might receive as the result of a referral.

   COMMENT: School districts vary in the array and quality of service made available to students and teachers. For exceptional children there are certain services which are typically available. If you are a third grade teacher and have observed a child displaying behavior suggesting he is unable to see without straining, your referral may result in the child eventually receiving correction glasses, a change in his seating arrangement, or the use of special aids depending on the degree of his vision problem. If you have made the decision that a child's problem warrants a referral, then generally you can expect that the referral will result in an evaluation beyond that which you probably completed before your decision to refer and that some recommendation regarding the student's program will be made. Referrals resulting in major changes in a child's program are most likely to occur if the student is in need of Special Education services. As a new teacher, your colleagues will be helpful resources to you in anticipating the result of a referral.

Enabling Activities (cont.)

1. Reading 3, Dunn, pp. 24-39. This selection describes the types of services comprehensive school districts provide for exceptional children. The emphasis is on describing direct services to children as well as consultation services to teachers. Pay particular attention to the discussion of Figure 1.3. Keep in mind that the more serious the student's problem, the more extensive the change will be in the child's program as a result of your referral.

Evaluation: Using Figure 1.3 from the Dunn selection as a handout, prepare four brief case studies describing children with problems at different levels. Use the four types illustrated in the Dunn selection as a guide in preparing the case studies. The student can identify where each case would be placed according to the model in Figure 1.3.

3. The student will be able to identify the professional position, i.e., roles in a school district which typically will be responsible for administering the referral process in a school district.

   COMMENT: Districts regardless of size employ similar organizational structure. A new teacher can expect to receive an orientation or a source of information related to the organizational structure of the district. Guidelines can be provided to help new teachers find out about the referral process but the most efficient process is merely to ask experienced teachers in the district how referrals are made and then follow up by becoming acquainted with the persons responsible for administering the process.

1. Read Handout 1 and complete the following tasks.

   a. Assume that you are a new teacher and after the first week have become acquainted with the speech therapist, a regular 4th grade teacher, and the assistant principal. List three questions you would ask each of the individuals in order to find out how the referral process works in the district.

   b. Using the administrative manual for the local public school system, assume that you want to make a referral regarding a child suspected of having a learning disability. Identify the administrator that most likely would be responsible for the referral process.

Student Objectives (cont.)	Enabling Activities (cont.)
	Evaluation: In reference to activity a, responses to the question should result in students' obtaining sufficient information to initiate a referral.
4. The student will be specific in communicating the reason for a referral by completing a referral form. COMMENT: The referral form represents the teacher's request for help. The response to the referral is closely related to the teacher's ability to convey her impressions of the child's problem via the referral form. Keep in mind that you may not have an opportunity to elaborate on the referral; thus, you need to be as specific as possible.	1. Referral forms vary in the amount of detail the teacher is required to provide. Referral forms should provide sufficient information to convey the nature of the learners' problem and what the teacher has tried as a means of resolving the problem. The requested information should not be so detailed that the teacher is discouraged from making referrals. Included with this activity are three sample referral forms. Review each form. Handout 2 is an example of a referral form used by the Lawrence Public Schools. Your assignment is to complete a referral using the Lawrence form. If you are doing student teaching or observing in a classroom, it may be possible to have your supervisory teacher suggest a student for whom a referral would be appropriate. If this is not feasible then create the necessary information for a hypothetical case. Be sure that your information is precise, consistent and as complete as the form allows. The information on the reverse side of the Lawrence Referral form is for record purposes. You need not complete that side.

Evaluation: The evaluation of activity 1 involves checking the completed referral forms, being certain each item is complete. Students should be prepared to verbally describe his/her reason for the referral and check it against the form.

Readings:

1. Kirk, Samuel A. *Educating Exceptional Children,* (2nd ed.), Boston: Houghton Mifflin Co., pp. 3-23. (On reserve in Education Library)

2. Smith, Robert M., *Teacher Evaluation of Educational Difficulties,* Chicago: Charles E. Merrill Publishing Co., 1969, pp. 1-29.

3. In L.M. Dunn (ed.), *Exceptional Children in the Schools.* New York: Holt, Rinehart and Winston, 1973, pp. 24-39.

Handout 1

THE PROCESSING OF REFERRALS IN A SCHOOL DISTRICT

Although there are commonalities among most school districts in terms of how referrals are processed, there are some differences which are introduced because of the size of districts or because of the number of services offered. The typical organizational structure involves a superintendent and assistant superintendents in charge of personnel, instruction, finance, and special services. In some cases, there may only be two assistant superintendents with responsibilities for administrative services and instructional services. In most cases, there will be an administrator responsible for special services related to children. If this person is not identified at the assistant superintendent level, he/she will likely be identified as a director or coordinator of services related to children. If the organizational structure involves only administrative services and instructional services, this particular person will generally be assigned to the instructional services part of the organization. The administrator of services for children will generally have the responsibility for most of the special services that a child experiencing a problem will require; however, the procedures for initiating referral will generally involve the teacher completing the referral form and submitting it to a designated person at the building level. This may involve the building principal or it may involve a person designated with responsibilities for receiving referrals such as a school psychologist, school counselor, or assistant principal.

Most of the referrals initiated by a teacher will involve the provision of some service by a person within the school district. However, there will be occasions when the child's problem will require services by an agency in the community which has resources which are not available from the public schools. This decision is generally made after the teacher has initiated a referral and evaluations have been provided by the appropriate person or persons in the school system. The decision to use community agencies to provide services for the child is not made by the teacher, but is generally made by a team which may involve the classroom teacher. As a teacher, your responsibility is to identify those children with problems which you are unable to deal with effectively and to initiate a referral which communicates to the office receiving the referral, your perceptions of the child's problem. It later becomes your responsibility to be as responsive as possible in the provision of additional information and in working with the special service personnel assigned to the case.

As a new teacher, your major concern is to do the best job possible in meeting the needs of those children assigned to you. To do this means that it is essential for you to have as much information as possible about the materials available to you, and to be as familiar as possible with those resource people available to you from within the district. These resource people are frequently referred to as support personnel or special service personnel. They may include the school psychologist, speech therapist, school nurse, school social worker, counselor, subject matter consultants, supervisors, special education personnel including resource teachers, itinerant teachers, and special subject matter teachers. Generally you can expect to receive a handbook which identified the special service personnel available to you. Keep in mind that, in general, the resource personnel provide services based upon referrals received. This means that unless you refer a child and the child has been assigned to one of the service personnel, you will not likely have contact with that individual unless you seek that person out. In mose cases, service personnel receive more referrals than they are able to serve efficiently. It is to your advantage to identify these individuals and become personally acquainted with them as soon as possible. One of the best avenues is through informal activities in the school building, such as between classes, at lunch hour, prior to school, after school, and following faculty meetings, to take it upon yourself to become acquainted with the special service personnel. This is not to suggest that you can by-pass the standard referral process merely because you are personally acquainted with the special service personnel involved. Certainly you should adhere to that process which is defined by the school district. But it is likely that you will get more assistance if you are acquainted with the special service personnel involved.

If the referral process is not clear as the result of reading the handbook or as a result of the orientation session that will probably be provided at the beginning of the year, then you should confer with the building principal, assistant principal, or a fellow teacher to be clear as to how to initiate a referral. Referrals for assistance are your responsibility as a teacher and unless you are sufficiently knowledgeable of how to initiate a referral, then some children who have needs that you are unable to meet may not have the needs met merely because of your inability to acquire appropriate assistance for them or for you in order to assist the child.

Handout 2

REFERRAL FOR EVALUATION

Student's Name ____________________ Parents/Guardian ____________________

Grade ____________________ School ____________________

Age ____________________ Teacher ____________________

Telephone ____________________ Date ____________________

Address ____________________ Student's Doctor ____________________

1. List specific behavior of the child that has indicated cause for referral: ____________________

2. Specify any physical problem that this child may have: ____________________

3. What contacts have you had with the child's parents: ____________________

4. How many other children in the home? __________. Ages ____________________

5. Indicate the area(s) of greatest difficulty for the child in school: ____________________

6. Check the level you believe to be most accurate for the child:

Item	High	Moderate	Low
Class Interest			
Aggressive Behavior			
Attention Required			
Group Participation			
Task Accomplishment			
Activity Level			
Nervousness			
Attentiveness			
Learning Ability			

7. What action have you taken to alleviate the child's problem? ____________________

Other Comments: ____________________

Your Name: ____________________

SPECIAL SERVICES REFERRAL FORM

Name: ____________________
Sex: ____________________
Age: _____ DOB: ____________
School: ____________________
Grade/Placement: ____________________
Transfer From: ____________________

Parent/Guardian: ____________________
Address: ____________________
Home Phone: ____________________
Work Phone: ____________________

Referral Date: ____________________
Referring Person: ____________________
Teacher: ____________________
( ) Original Referral
( ) Review

What is this student doing that causes you concern? ____________________

____

What are the student's strengths? ____________________

____

REASONS FOR REFERRAL:

___ Gifted
___ Emotional Problems
___ Behavior Problems

___ Learning difficulties
___ Visual-motor problems
___ Peer interaction problems

___ Impaired Hearing
___ Impaired vision
___ Impaired speech

Reading Difficulties
___ Phonics
___ Comprehension
___ Word attack skills
___ Reversals
___ Other: ____________

Math Difficulties
___ Story problems
___ Mechanics
___ Memory
___ Understanding concepts

Other Difficulties
___ Handwriting
___ Spelling
___ Language skills
___ Visual perception
___ Auditory perception
___ Listening
___ Speaking
___ Attendance

Behavior Patterns
___ Short attention span
___ Does not complete assignments
___ Failure to follow directions

___ Withdrawn
___ Aggressive
___ Fails to listen

___ Fearful
___ Out of seat
___ Talks out of turn

___ Other: ____________________

How would you like Special Services to help this student? ____________________

____

Parents contacted? ____________ Date ____________ By whom ____________

OTHER PERSONNEL WORKING WITH THIS STUDENT:

___ Learning Specialist
___ Hearing/Speech
___ Personal/Social Adjustment
___ Vision

___ Homebound/Hospitalized
___ School Nurse
___ Remedial Reading
___ Gifted
___ Other agency or service (Specify) ____________

___ Adaptive PE/Perceptual Motor
___ MR
___ Counselor/Social Worker
___ School Psychologist

____________________ Principal

____________________ Date

Example B

REFERRAL FORM

Student's Name ______________________ Grade ______________________

Age ________ Sex __________

Referring Teacher's Name ______________________________________

Building ______________ Room ______________ Phone ______________

Date of Referral ______________________

Reason for Referral

(describe child's problem and what you have done in an attempt to resolve the problem. Be specific and provide examples where appropriate).

Teacher's Signature ______________________

Date ______________________________

Student's Parent or Guardian: Name ______________________

Address ______________________

Phone ______________________

SPECIAL SERVICES REFERRAL AND STAFFING PROCEDURES

I. Teacher or principal notifies parent of concern about individual student. (Student self-referrals to social workers, counselors, nurse or psychologists for personal concerns need not follow outlined procedure.)

II. Referral may be made by anyone with legitimate concern (i.e., parent, teacher, special services staff, administrator, community agency personnel, student).

III. Referral is made to the principal or his designee by completing SPECIAL SERVICES REFERRAL FORM.

IV. Preliminary referral disposition

The special services staff chairman (the principal or his designee) and members of the special services staff (i.e., principal, referring teacher, psychologist, special teacher, social worker/counselor, nurse) will:

A. Screen the referral
B. Determine who will act as case coordinator
C. Determine what data needs to be collected as indicated by characteristics of the referred student
D. Determine who will collect data
E. Determine the need for outside expertise
F. Send a copy of the referral to the Director of Special Services

V. Obtain a signed PARENTAL PERMISSION FOR EVALUATION FORM

VI. Data Collection (may include any or all of the following)

A. Observation
B. Informal or formal evaluation (social, emotional, and physical, or academic)

VII. Notification of the time and the place of the staffing will be made to the appropriate participants by the case coordinator. Appropriate participants will include:

A. Current teacher, potential receiving teacher
B. Current principal, potential receiving principal
C. School psychologist
D. School social worker/counselor
E. Notify appropriate special services coordinator
F. Other appropriate discipline

VIII. The staffing committee will:

A. Develop a written educational plan approved by a 2/3 majority of the staffing committee which defines the appropriate service model to meet needs of student.

B. Provide a schedule for the periodic review and readjustment of the recommended educational plan.

C. Assign responsibility for provision of due process and maintenance of confidentiality of information collected.

D. Staffing committee will file a report of the staffing disposition with the Director of Special Services within a week from the date of the staffing.

IX. If a 2/3 majority of the staffing committee is not obtained regarding the recommended educational plan, conflict resolution will be initiated. The Director of Special Services will be case coordinator and may select and notify any additional participants for a special staffing.

Conflict resolution may include:

A. Review of original data
B. Collection of required additional data
C. Notification by Director of Special Services of the decision resulting from the special staffing to those concerned.

X. Parental Contact

A. According to law, written consent will be obtained from the parent or guardian before any child will be:

1. Tested by special services staff
2. Excluded, reassigned or transferred from regular school classes.
3. Placed in or transferred to or from special education services.

B. Notification to parents of a proposed change in educational program will be given both orally and in writing and will:

1. Describe the proposed educational plan
2. State the reason for the proposed educational plan
3. Inform the parent of the right to object to the proposed educational plan at a hearing (see DUE PROCESS PROCEDURE)

XI. Implementation of Educational Plan

A. Implementation of the proposed educational plan will be initiated when written parental consent is obtained.

B. If there is parental objection to the proposed educational plan, school officials may take action to resolve the conflict (see DUE PROCESS PROCEDURE)

XII. Periodic Review of Educational Plan

A. Case coordinator will schedule review of educational plan by special services team

B. Special services team will review educational plan

C. Case coordinator will notify appropriate persons of status of educational plan, i.e., parent, special services team in student's home school, etc.

D. If review of educational plan includes a recommendation for reintegration of student into home school, case coordinator will call a staffing of special services teams from both schools.

RECORD OF CASE DISPOSITION

1. Preliminary Referral Disposition Case Coordinator ______________________________

   a. Personnel attending ______________________________

   ____

   b. Special Services personnel assigned to case and data to be gathered: ______________________________

   ____

   ____

   c. Date for staffing ______________

2. Staffing

   a. Personnel attending ______________________________

   ____

   b. Proposed educational plan ______________________________

   ____

   c. Review date ______________

3. Parent conference

   a. Personnel attending ______________________________

   ____

   b. Comments (attach additional page if necessary) ______________________________

   ____

   ____

   ____

4. Review of educational plan

   a. Personnel attending ______________________________

   ____

   b. Comments ______________________________

   ____

   ____

DEVELOPMENT AND USE OF THE I.E.P.

by
Edward L. Meyen
The University of Kansas

The teaching of exceptional children has always required considerable instructional planning by teachers. The characteristics of students whose learning problems are related to handicapping conditions dictate that teachers be skilled in particular planning procedures, e.g., observing pupil behavior, conducting educational assessments, interpreting evaluation information, task analysis, specifying behaviorally stated objectives, and monitoring pupil performance related to particular objectives. While teachers of exceptional children have employed such skills in their instructional planning, they have been free to determine the general nature of their planning procedures. However, passage of PL 94-142 (the Education of all Handicapped Children Act) has made instructional planning mandatory. The law requires that an Individualized Educational Program (IEP) be developed and maintained on every handicapped child. The content, procedures and general evaluation guidelines are spelled out in the Rules and Regulations governing implementation of the law. This module provides activities and resources designed to assist students in developing IEPs which comply with the requirements of PL 94-142.

Student Outcomes

Upon completion of this module students will be: (1) knowledgeable of the requirements in PL 94-142 pertaining to IEPs. (2) able to integrate skills in task analysis and writing behaviorally stated objectives in the writing of IEPs. (3) able to complete an IEP format given simulated case study information.

Instructor Information

Prerequisites:

Because this module involves teaching a planning process which is directed in part by law it is essential that the instructor be familiar with the IEP requirements and aware of what is happening in the schools as teachers implement the requirement. Even though the IEP concept is sound and probably also has merit for nonhandicapped children, there is resistance by many teachers and administrators to the requirement. Many of the problems are more assumed than real, but they operate to interfere with some districts' complying with the requirement. Students participating in this module will likely raise questions about the time required, the amount of pupil information needed, and express fear that the IEP is an accountability measure and not an instructional vehicle. Because of these circumstances a prerequisite to teaching the module is for the instructor to possess basic information on the IEP inclusive of preliminary research information. Thus, prerequisites are listed for instructors in addition to students.

Instructor Prerequisites:

(1) Read Meyen, E.L. *Exceptional Children and Youth: An Introduction.* Love Publishing Company, Denver, Colorado, 1978, pp. 111-136.

(2) Read Safer, N.D. Morrissey, A., Kaufman, J., and Lewis, L., "Implementation of IEP's: New Teacher Roles and Requisite Support Systems" *Focus on Exceptional Children,* Volume 10, Number 1, March 1978, pp. 1-19.

(3) Review *Guide for Trainers: A Resource for Workshops on Developing Individual Education Programs,* published by National Association of State Directors of Special Education, Washington, D.C., 1977.

(4) Review *Parental Involvement in the Special Education Pupil Planning Progress: The School's Perspective,* published by Bureau of Education for the Handicapped, Washington, D.C.

Student Prerequisites:

(1) Competence in applying task analysis skills.

(2) Competence in writing behaviorally stated objectives.

(3) Familiarity with characteristics of exceptional children.

Organization:

The enabling activities are designed to assist students in achieving three primary and one secondary objective. Optional activities are provided for two of the objectives. When options are presented suggestions are provided for determining the necessity for using the options. Enabling activities include reading, lectures, the examination of materials, writing IEPs, and media. Suggested content and transparencies are provided as resources for the lecture activities. Evaluation guidelines in the form of test items and/or criteria are provided for each activity. A secondary objective and accompanying enabling activities are provided on the design of an IEP format. If time permits this can be an important cumulative experience.

Content Overview:

Following is a brief outline of the content covered through the module.

I. Review of Instructional Planning Procedures:
    A. Goals of instructional planning.
    B. Planning guidelines.
    C. Consideration in planning for exceptional children.

II. Basic Information on IEPs.
    A. Requirements of PL 94-142.
    B. Required teacher skills.
    C. Current status of implementating IEPs in the schools.

III. Writing IEPs.
    A. Examining examples of IEPs.
    B. Writing IEPs using case study data.

Suggestions for Teaching:

This module requires the instructor to assume an active role. If students posses the specified requirements the module should require three one hour class sessions to complete. This time allocation is exclusive of the preparation time required of student to complete readings and also to review notes. If the optional media activities (i.e., film and slide tape sessions) are found to be necessary, they can be set up for use outside of class time.

The master copies of transparencies provided for the lectures represent an outline of the suggested lecture content. They should be self explanatory assuming that the instructor has reviewed the prerequisite material. The instructor should feel free to modify the content accordingly. The purpose of the transparencies is to provide cues for discussion. It is important to stimulate questions on the part of students. Otherwise, they may demonstrate the procedural skills of writing IEPs, but not really understand why certain tasks are important. Through discussion they should be encouraged to present their concerns and to raise questions.

Evaluation:

An objective multiple choice exam is provided to cover important informational content. Criteria are provided to use in evaluating the activity on analysing IEPs and in evaluating student produced IEPs. PLEASE NOTE: The exam can be obtained through the project coodinator. It is not included as a portion of this booklet.

DEVELOPMENT AND USE OF THE I.E.P.

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Prospectus

Individual Educational Programs (IEP) are now required for all handicapped children and youth. This means that regular as well as special education teachers will be involved in the development of IEPs. This module is designed to provide students background information on the requirements of PL 94-142 which mandates the preparation of individual educational programs. Experiences are provided in examining sample IEP forms and in the development of an IEP. All teachers can expect to participate in the IEP process as they assume a professional teaching role. While this module will assist preparing teachers in understanding the principles of instructional planning and the procedures for developing IEPs, the attainment of proficiency will necessitate considerable practice under the actual conditions of classroom teaching.

Student Objectives	**Enabling Activities**
1. The student will be able to demonstrate an understanding of basic instructional planning principles and the IEP requirements of PL 94-142 through performance on an objective exam.	1. Reading 1, Meyen, pp. 111-136. 2. Lecture: "The I.E.P.: What it is and what's happening in the schools" (See Transparency Set No. 1). 3. *Optional Slide Tape Presentation* "The Exceptional Student and You: Placement Division Making" 18 minutes available from the Department of Special Education. 4. Discussion session: Have students contribute to the listing of 10 advantages to be derived from the practice of writing IEPs and 5 potential problems.

Evaluation: Administer the multiple choice examination which accompanies this module.

2. The student will be able to determine the degree to which sample IEP forms meet the requirements of PL 94-142 by applying a set of criteria.	1. Reading No. 2, Hudson and Graham, pp. 13-32. 2. Lecture: "Examples of IEP forms": (See Lecture Transparency Set No. 2). 3. Evaluation Exercise: Distribute Handout No. 1 "IEP Evaluation Criteria" and supply IEP forms. Directions for exercise are on Handout No. 1.

Evaluation: Check the performance of students on Handout No. 1.

Student Objectives (cont.)	Enabling Activities (cont.)
3. Students will be able to complete an IEP given a case study and a sample IEP form.	1. Discussion of information provided in sample case study. Handout No. 2. 2. Writing an IEP: Distribute Handout No. 3 which is a sample IEP form. Assign students to complete the IEP form using data from Handout No. 3. 3. Optional Activity: If students are having difficulty writing behaviorally stated objectives show film "Target for Tomorrow" 12 minutes available from the Department of Special Education library at KUMC.

Evaluation: Check student prepared IEPs using criteria provided.

4. Student will be able to design an IEP form which meets the requirements of PL 94-142. (Secondary objectives) *Optional*	1. Lecture: "Requirements of an IEP System" (See Lecture Transparency Set No. 3). 2. Assign students the task of designing an IEP format which meets the requirements of PL 94-142. This can be a small group exercise.

Evaluation: Apply the guidelines in transparency Set No. 3 as criteria in judging the products produced by students.

3 Instructional Planning for Exceptional Children and Youth

Edward L. Meyen
University of Kansas

Teacher training programs historically have emphasized the need for instructional planning by teachers. School districts have reflected this emphasis in their policies on lesson plans, in curriculum selection and development, and in guidelines on the evaluation of teacher effectiveness. In spite of the unquestioned need for planning, however, the planning process has only begun to emerge as an effective, widespread practice.

The increased emphasis on sound instructional planning can be attributed in part to the growing concern among consumers. Parents and the public in general are beginning to raise questions about the reported decline in academic achievement, particularly in the basic skills. Initially, this concern tends to center on the curriculum, but eventually it focuses on decision making regarding individual students. At that level instructional planning becomes a major concern.

The lack of rapid progress in instructional planning has related primarily to the practical realities of the classroom teacher's role. For the most part, teachers have had to initiate, evaluate, and review student programs within the constraints of overloaded schedules, minimal planning resources or directives, and limited administrative support for planning. In the past, when administrators became concerned about the need for planning, or when parents sought information related to their children's programs, the teacher was the focal point of most of the pressure.

The special education teacher's role in instructional planning also has been affected by the above circumstances—in spite of the obvious need for detailed planning in programming for exceptional children and youth. Too often, the evidence of instructional planning has consisted of hurriedly written lesson plans limited to general goals, detailed assignments combined with anecdotal records, and history-oriented cumulative records. Such planning gives little more than nebulous directives and does not provide the resources needed for instructional decision making. As a basis for programming for exceptional children, this process is totally insufficient.

Several significant developments, however, have had a positive influence on the teacher's role in instructional planning:

1. Districts are beginning to provide release time for planning;
2. More resource personnel are available to aid teachers in making planning decisions;
3. The range and amount of materials available simplify the teacher's efforts in designing plans appropriate to the needs of their students;

4. Instructional planning is being linked with accrediting agencies as a measure of quality control; and
5. The Individualized Education Program (IEP) requirement of Public Law 94-142 represents the single most important event regarding instructional planning for exceptional children. (Later in this chapter, the IEP will be discussed as an instructional planning approach.)

Discussions on instructional planning among teacher trainers often result in the expression of differing views. Some will agree that understanding the child is most critical and that teachers who are responsive to the needs of the learner will make good instructional decisions without a technology of planning. Others place importance on knowing the subject matter; from their perspective, appropriate instructional decisions emanate from the context of what is to be taught.

Both arguments have obvious merit, but most teachers enter the profession without sufficient knowledge of the learner and without sufficient knowledge of the subject matter. Although they have learned some skills in both areas, they lack the level of expertise to intuitively make instructional planning decisions. Teachers must rely on experience to develop and improve their judgment in instructional decision making. Even experienced teachers require a planning process to assure that the varied needs of their students are met.

As more exceptional children enter the regular classes, the need for skills in instructional planning will increase in importance. The regular class teacher, in addition to encountering more children who present complex instructional demands, also will need to develop competence in areas tangential but related to instructional planning. For example, the National Advisory Council on Education Professions Development (1976) has identified the following set of skills as necessary for all teachers:

> a. Teachers should understand how a handicap affects a child's ability to learn in the classroom.
>
> b. Building on this understanding, teachers need to become competent in recognition of handicaps and prescription of learning experiences. They will need to be able to identify specific conditions and prescribe appropriate instructional experiences. The level of sophistication in this area need not be high, as expert advice and support should be available through one of many possible delivery models.
>
> c. In conjunction with diagnosis and prescription of learning experiences, regular classroom teachers will need skills in the individualization of instruction. The variance posed by handicapped children necessitates at least some degree of individualization, requiring a familiarity with resources and instructional materials for handicapped children.

d. Teachers will need a better understanding of the emotions of handicapped children. Not only must they be able to empathize with the handicapped but they must be able to focus a part of the education experience on the child's emotional development.

e. Teachers need to develop a conceptual and practical understanding of the process of mainstreaming. Integral to this is the development of a new understanding of the role of the special education teacher as a consultant and resource person. Perhaps most importantly, teachers will need to develop competence and self-confidence in dealing with handicapped children, based upon skills developed through experience, additional in-service training, and use of support services.

f. Finally, teachers will need to be able to apply this collective understanding in their interactions with parents of the handicapped and with nonhandicapped (p. 16).

A significant problem to be faced in redirecting teacher efforts in instructional planning relates to teacher attitudes. Having become accustomed to planning under adverse conditions, many teachers perceive instructional planning as an added task neither valued by administrators nor resulting in benefits for them or their students. This attitude is reasonable in view of the circumstances under which instructional planning has been carried out in the past. A reallocation of resources and changes in attitudes of administrators is required if effective instructional planning is to be achieved.

INSTRUCTIONAL PLANNING AS A PROCESS

No single set of planning procedures applies to all instructional settings. Teachers vary in their planning preferences just as they prefer particular teaching methodologies. Differences in available resources also influence the instructional planning approach a teacher might follow. But certain general principles and planning concepts have broad application and, if followed, increase the opportunities for quality instruction. Instructional planning ideally results in providing effective instruction appropriate to learner needs. Within this context, at least four objectives specific to instructional planning are set forth:

1. To make use of available information on learner characteristics and instructional options in planning specific teaching activities.
2. To establish short-range objectives within a long-term plan that can be implemented as intended, often by persons other than the teacher responsible for the original planning.
3. To allow for collecting evaluative evidence that illustrates the pupil's cumulative performance.

4. To provide a base for instructional decisions regarding programs for individual pupils.

To be effective, instructional planning must focus on the uniqueness of the individual learner. Thus, a planning process does not substitute for the teacher's lack of knowledge about how children learn. Calder (1977) offers 11 principles for instructional decision making. These principles illustrate a range of teacher competencies which can be considered as prerequisites to effective planning.

> 1. The learner should possess the basic readiness skills needed to ensure some degree of success in the new task.
> 2. The learner should be made aware of the value and meaning of the new task.
> 3. The task should be analyzed to determine the difficulties that may be encountered because of any special needs of the learner.
> 4. The task should begin with familiar experiences and skills and progress to new experiences and skills.
> 5. The task should be presented in a manner that will provide the learner with a degree of success and satisfaction.
> 6. The task should be planned and a procedure developed for presenting it to the learner. When possible, the plan should be initiated and executed by the learner.
> 7. The task should include options that meet the learner's learning style.
> 8. The task should have flexibility and provide for differentiated assignments in order to meet the individual needs of the learner.
> 9. The task should be planned to provide the learner with reinforced repetition and practice to ensure retention.
> 10. The task should provide for constant performance evaluation by the learner, teacher, paraprofessional, or peer tutor.
> 11. The assignment of a new task should be the result of continuous evaluation of the learner's performance on the present task (p. 13).

In implementing these objectives and principles, a systematic approach to instructional planning clearly is required. To be maximally effective, instructional planning for exceptional children must encompass more than merely specifying objectives, initiating activities, and measuring their effects on pupil performance. Consideration also must be given to identifying behaviors that suggest learning problems and becoming familiar with procedures that bring the children to the attention of appropriate resource personnel. While these concerns are beyond the actual instructional process, they are critical to instructional planning that will result in the most appropriate educational placement for the exceptional child. For the nonhandicapped child, instructional placement decisions rarely are made, since the child merely progresses through the graded system; placement decisions are important, but they primarily serve to set the conditions for instructional decisions.

Planning Guidelines

Following are some suggestions that can serve as guidelines in the instructional planning process. They are not rules, nor do they constitute a recipe for successful instructional planning. Rather, they derive from observation of teachers engaged in successful instructional planning for exceptional children.

Systematization

The purpose of instructional planning is to assure that instructional decisions about a student's program consider all information pertaining to the learner's needs. This requires systematic planning. The relative severity of learning problems exhibited by exceptional children dictates further that planning be continuous and not occur only when the child's problem is interfering with instruction.

Detail

No plan can describe all of the skills, concepts, and information that a child will or should be taught. Even if this were possible, it would not be desirable. Learners vary in their responses to tasks, and the risk is present that a teacher may adhere to a detailed plan when evidence shows that the plan should be altered to meet the child's changing needs. Planning must allow for "on the spot" decision making.

On the other hand, sufficient planning time on the part of the teacher is important to success of the plan. Decisions must be made on how detailed a plan should be regarding skills, activities, and materials. The more serious the learner's problem, the more precise the planning required. Another major consideration pertains to whether or not persons other than the teacher will be involved in carrying out the plan. The plan should contain sufficient information to assure appropriate interpretation and implementation.

Format

The content and provisions for remediation, not the plan's organizational format, determine its appropriateness for a particular student. The organization and recording format of instructional plans, however, do influence how well planning efforts succeed. An organized plan simplifies the matching of instructional options to learner characteristics.

To ensure uniformity, districts often adopt or design a particular planning system. Some advantages accrue in having all teachers use a similar format: A uniform approach simplifies the administrator's role in evaluating the effectiveness of teacher planning; and uniformity in format enhances communication among teachers. In most cases, forms are designed to make planning more convenient and to reduce the amount of time involved.

Program Emphasis

In developing instructional plans, teachers have a tendency to refer only to the child's most immediate problems. Certainly, more specific planning is required to remediate obvious serious learning problems, but a program or curriculum emphasis also must be maintained. For example, a visually impaired child who is skilled in math may be experiencing difficulty in social studies because of slowness in reading by the braille method. Planning attention must be given to the student's needs in mathematics and other subjects, even though more short-term planning may be involved in developing the student's braille reading speed and alternatives for acquiring experiences in social studies.

Intensiveness

Once a teacher has developed a program in which a child progresses satisfactorily, the time and effort (intensity) allocated to planning can be reduced. This does not mean that the teacher stops recording plans, collecting performance data, or conferring with other teachers. It means that less detailed planning is required and more planning time can be devoted to students for whom a satisfactory plan has not yet been developed.

Because of the amount of time required in effective instructional planning, the teacher must make judgments regarding how much time to devote to planning for each student. If evidence suggests that a student is progressing satisfactorily, planning becomes less formal and the emphasis shifts to program monitoring.

Evaluation

Unless planning includes the evaluation of short- and long-term objectives, the benefits will be minimal. Because specific evaluation tasks are sometimes difficult to design and not generally available in commercial form, some teachers tend to resort to available achievement measures or other standardized tests. Although standardized tests have certain advantages, they generally are not appropriate for measuring student performance on specific tasks included in routine instructional plans.

Teachers need to carefully determine when standardized measures are appropriate and when they need to consider other options. Teachers must evaluate their instructional planning, but they must use evaluation measures that relate directly to the student's instructional program. This generally results in teachers' having to design at least part of their evaluation tasks. When incorporating evaluation tasks into instructional planning, attention must be given to the relationship of the evaluation task to the instructional activity, the time required for the teacher to design the task, the time required by the student to demonstrate task performance, and the value of the information derived in this process.

Procedures

In deciding upon instructional planning procedures, two primary factors must be considered — the impact of instructional planning on student programming, and the demands which the planning process places on teachers. The previously outlined guidelines (systematization, detail, format, program emphasis, intensiveness, and evaluation) combine to influence programming for students. But they also create time demands on teachers. If the procedures are too complex and time consuming, the teacher may not be able to plan and teach effectively. If the plan is too simple, little is gained in terms of pupil benefits.

The initial goal is to design procedures that allow for efficiency on the part of the teacher and enhance instructional decision making specific to students' needs. The ultimate goal is to employ planning procedures which result in benefits for the learner.

Teachers should assume leadership in developing planning procedures. Administrative concerns do not always contribute to teacher efficiency or pupil benefit, and administrators often answer general program questions by expanding instructional planning requirements. If program questions can be answered by an instructional planning process that does not add substantially to the teacher's workload, that process should be considered. The primary emphasis, however, should be on instructional planning for specific students, and the emphasis must be on developing *workable* planning procedures.

CONSIDERATIONS IN INSTRUCTIONAL PLANNING FOR EXCEPTIONAL CHILDREN

Some exceptional children enter school already having been identified as possessing characteristics that likely will interfere with their school performance. In general, the most serious handicapping conditions are congenital in nature and include impaired vision, defective hearing, physical problems, and multiple handicaps. For exceptional children whose problems have been identified prior to entering school, instructional planning specific to their needs can be initiated upon their enrollment. Under such circumstances, the teacher probably will have the advantage of possessing information regarding the child's preschool history.

The majority of exceptional children, however, are not identified until they encounter demands in school with which they cannot effectively cope. Although instructional planning should occur for all children, too often specific instructional planning does not occur until after a student is identified as having a problem. If the child is fortunate, a teacher will notice the child's difficulty before it becomes more serious.

Conditions resulting in the identification of a child as exceptional are numerous — social inadequacies, language skills not fully developed, academic requirements beyond the child's ability, specific learning tasks for which the child has not developed readiness, minor vision or hearing problems which previously had been unnoticed but which do affect his/her school performance. For these kinds of students, instructional planning must be broadened to include the identification of behaviors which suggest potential learning difficulties. The planning process for exceptional children must begin *before* the child has been identified as having special needs.

Suggested Planning Steps

Five sequential steps comprise the basic guidelines in planning for these children: (1) identifying potential problems; (2) initiating a referral;

(3) assessment; (4) making instructional/placement decisions; and (5) implementation.

Identifying Potential Problems

This first step actually should be preceded by a discussion on how to *prevent* children from developing learning problems. Thus, for purposes of describing a planning process applicable to exceptional children, the importance of the regular class teacher in the identification process must be stressed.

Most exceptional children are first identified as such by regular teachers who initiate a referral for assistance resulting from their concern about the child's performance. The regular class teacher is in an ideal position to observe students under a variety of circumstances. So, in addition to understanding typical patterns of child development in social, cognitive, and physical areas, the teacher must be a skilled *observer*. Even though some children are identified through planned screening procedures (e.g., vision, hearing, speech and language), teachers already should have identified behaviors suggesting possible problems in these areas.

Many techniques are available for teachers to use in identifying children with learning difficulties. These include criterion measures, informal tests, skill inventories, diagnostic tests, and observation scales. Although such testing devices are helpful, the skilled teacher also is alert to variance in pupil performance from day to day and task to task, along with other cues to inadequacies in their students' functioning.

Initiating a Referral

Although special education personnel often are involved in referrals for reevaluation or supplemental assistance for children with mild handicaps, the regular class teacher is the primary referral source. Exceptional children, therefore, often are dependent upon the regular class teacher's skill in first identifying their problem, then providing the necessary remediation or initiating a request, or referral, for assistance.

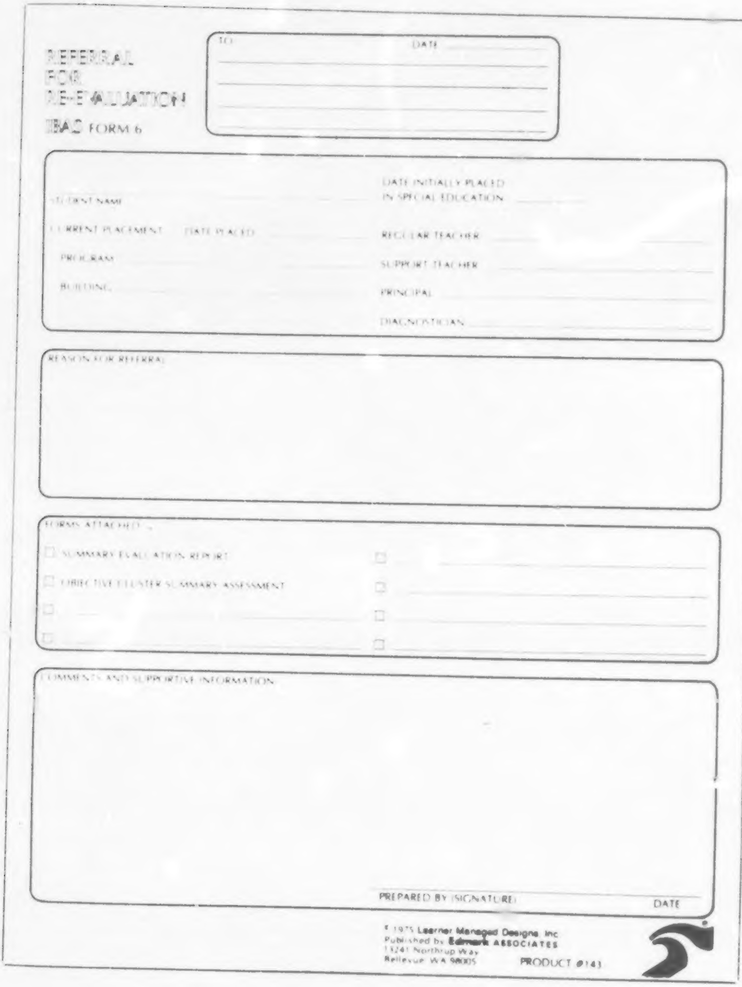
Historically, a referral for a student suspected of needing special education meant, first, removing the child from the regular class and, second, relieving the regular class teacher from further instructional responsibility. But with the current emphasis on least restrictive alternatives, mainstreaming, and integration, the referral process becomes the first step in assisting the regular teacher to meet a pupil's instructional needs. For some students, the referral will result in part-time or full-time placement outside the regular class but, more likely, the referral process will result in additional resources being made available to the regular class teacher. Resources may be in the form of diagnostic information, consultation, access to special materials or equipment, or actual assistance in teaching the child.

Once the teacher has decided to request assistance in remediating a child's problem, he or she is faced with the actualities of initiating the referral. Most districts have established referral procedures, generally involving use of a form that records the reason for referral, among other items. Through inservice training or a detailed special service manual, specific directions may be given regarding whom to contact for each of the problems encountered.

The intent of the referral process is to simplify the teacher's role and to expedite delivery of services to both teacher and child. For this reason, the typical referral form is usually brief. (Figure 3.1 provides an example). Teachers inexperienced in initiating referrals may find the form difficult to complete because they do not know what information to share and what questions will result in obtaining the proper assistance. One should remember that referral is only the first act in requesting assistance. Additional opportunities will occur for personal consultation, allowing for elaboration. This should not imply, however, that the teacher need only record a general statement about the child to suggest that testing is needed.

Moran (1976), in describing the elements of an effective referral question, states:

> First, a good referral question is accompanied by all information already available to the teacher. It cannot be stressed too strongly that a teacher who refers a student must know everything that can be learned about him or her under classroom conditions before s/he should even consider referring the learner to someone else for testing.
>
> It is totally inappropriate, for example, for a teacher to refer a student for evaluation of visual or auditory subskills involved in the reading process without simultaneously reporting to the potential examiner the student's instructional reading level, scores on skills tests in reading, and information about the student's level of vocabulary and grammar. If a teacher refers a child as a reading problem without providing the test information s/he already possesses, the teacher cannot be surprised if testing does not go beyond what s/he had already discovered. All relevant classroom test scores, behavioral observations, and reports of daily written products should be presented in summary form as part of the referral.
>
> Second, the teacher should always report as part of a referral any intervention which s/he has already attempted with this student. For example, if s/he has conducted trial teaching of a VAKT (Visual-Auditory-Kinesthetic-Tactile) method of presenting sight words and has found it ineffective, s/he should report that



REFERRAL
FOR
RE-EVALUATION
IBAS FORM 6

TO ____________ DATE ____________

STUDENT NAME ____________
DATE INITIALLY PLACED IN SPECIAL EDUCATION ____________
CURRENT PLACEMENT DATE PLACED ____________
PROGRAM ____________
BUILDING ____________
REGULAR TEACHER ____________
SUPPORT TEACHER ____________
PRINCIPAL ____________
DIAGNOSTICIAN ____________

REASON FOR REFERRAL

FORMS ATTACHED ✓

☐ SUMMARY EVALUATION REPORT
☐ OBJECTIVE CLUSTER SUMMARY ASSESSMENT
☐ ____________
☐ ____________
☐ ____________
☐ ____________
☐ ____________
☐ ____________

COMMENTS AND SUPPORTIVE INFORMATION

PREPARED BY (SIGNATURE) ____________ DATE ____________

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Bellevue, WA 98005
PRODUCT #143

Figure 3.1 Referral for Reevaluation

> information; otherwise, s/he is likely to find that the examiner will recommend just that procedure for the learner whose visual skills are relatively weak. Any special materials or methods which have been tried, and the length of time they have been applied, should be mentioned. Also, the textbooks and supplementary materials currently being used with the student should be listed. If the classroom operation includes a system of rewards or a token economy, that information should be provided so that any recommendation for intervention would be made within that framework. If these types of information are provided, the teacher should not find, as so many have reported, that the examiner suggested interventions which have already been undertaken.
>
> Third, the teacher must make a statement of what s/he has to know in order to instruct the student appropriately. That is, s/he has to be able to state what it is about the student that s/he cannot discover in the classroom. In the case of a reading problem, for example, s/he should be able to state that s/he would like to know whether Johnny demonstrates the subskills to profit from group reading instruction in the strongly phonics-oriented basal reader, or whether auditory skills are markedly below norms for his age. S/he may want to ask if Johnny's failure to complete written seatwork appears to be due to behavioral causes or deficient fine-motor skills. S/he may suspect that a student is unusually bright, and wants to know how far s/he should push the child to achieve and how he can best be motivated since he is not now achieving. If the question is one of placement, it should be so stated: Does Johnny require individualized instruction in a small group situation such as a resource room or self-contained special class? Is Jim a candidate for placement in an EMR classroom on the basis of his difficulty in keeping up with the lowest groups in the class? Should Sally have reading instruction in the resource room but remain in the classroom for all other instruction? (p. 8).

If the child's problem is not related to academic performance, but rather to social behavior or a physical/medical condition, the reported information will vary. But the responsibility remains to clearly communicate the nature of the problem.

In addition to communicating an interpretation of the child's problems and the expectation for assistance, the teacher has an obligation to prepare the child for referral. In some cases, the student's only experience with special personnel probably has been in a group situation.

Most districts have due process procedures that begin with obtaining permission for testing from parents. These procedures tend to be administrative and do not focus on helping the child understand why testing is necessary, or why other people are interested in his or her school performance. In any referral that results in testing, observation, or consultation with the student, the teacher should assist the student in understanding what will take place and why. The student's attitude clearly can influence test performance. Teachers should be alert to any cues that suggest a student is anxious about the test or consultation, and emphasis should be placed on helping the student in the area in which difficulty is being encountered. *The goal is to prepare the student to perform optimally under the testing or consultation situation.*

Assessment

The level and kind of assessment will vary according to the reason for referral. If the referral is health-related, the school nurse or physician may be involved. If the problem is related to hearing, speech, or language, the audiologist or speech clinician may be called in. If the reason for referral relates primarily to academic performance, the school psychologist or a person identified as an educational diagnostician may participate. Frequently, the response to a referral entails participation by several resource staff members.

Diagnostic procedures typically are employed in evaluation activities specific to academic problems. Although the diagnostic procedure used in other types of referrals will vary, the general series of evaluation activities will be similar.

The first priority of the educational diagnosis will be to clarify the reason for referral and to attempt to substantiate the existence of an instructional problem. This generally will involve a conference with the referring teacher and a review of anecdotal and related information specific to the suspected problem. The diagnostician may observe the student in the classroom, confer with parents, or consult with other resource personnel prior to determining what instructional steps to follow. *The diagnostician's objective is to determine the nature of the problem and to obtain the necessary information to prescribe an effective educational program.*

Formal testing may or may not be required. When the referral involves a child suspected of having a handicapping condition, the evaluation process frequently results in either a recommendation for the regular class teacher to use specific instructional techniques or for the student to be placed in special programs on a part- or full-time basis. In such cases, specific procedures must be applied. (A later section in this chapter describes these procedures.)

Having confirmed that an instructionally related problem exists, the diagnostician or school psychologist usually assumes responsibility for:

1. Determining what evaluation information is necessary to provide appropriate remediation;
2. Obtaining required approvals for testing;
3. Administering or arranging for administration of appropriate evaluation instruments;
4. Compiling needed information from appropriate sources (teachers, other professionals, records, and parents);
5. Observing the student in natural and structured settings;

6. Analyzing test results and data collected;
7. Organizing test results and data into a report format usable by a review committee;
8. Formulating recommendations;
9. Translating diagnostic information into information usable by teachers or parents;
10. Initiating procedures for IEP conferences, if indicated.

If a child is determined not to be handicapped, the diagnostician will work directly with the teacher in implementing the recommendations. If the child is found to have a handicapping condition, an Individualized Education Program (IEP), as required by PL 94-142, must be developed in a formal conference. The conference committee then becomes responsible for making instructional and/or placement decisions.

Making Instructional/Placement Decisions

The child's teacher continues to make instructional decisions during the time the referral is being processed, since the child is still enrolled. Because the referral process requires time, the teacher must continue to work with the student as effectively as possible. After the evaluation process has been completed, recommendations are made regarding needed changes in the student's program. These recommendations may involve the child's regular teacher using special techniques or materials, or the recommendation may entail placement in a special program on a part- or full-time basis.

The instructional/placement decision is a critical step in the general planning process. Evaluative and descriptive data specific to the child must be available if appropriate decisions are to be made. Decisions regarding instructional options and placement should be made in conference with resource persons and teachers most directly involved in the child's program. Because of the number of children referred for evaluation, time rarely permits more than one conference to make instructional and/or placement decisions on a referral — making the preceding steps exceedingly important. A clear set of directives should result from the conference, in terms of instructional methods and programming materials to be used, as well as evaluation guidelines and follow-up suggestions.

Implementation

Presumably, teacher and student both benefit from the planning process. The degree to which the teacher benefits depends in part on his or her effectiveness in the planning process. If the teacher clearly communicates information on the child's problem in the referral, is responsive in conferring with the diagnostician, and is an effective conference participant, the implementation step should prove beneficial.

The teacher initiating the referral now may have full responsibility for implementation, or the responsibility may be shared with a resource teacher or other support personnel. Under some circumstances, implementation may involve transferring the student to a special class, in which case the teacher is responsible for the transfer process. In situations where the student remains with the referring teacher part- or full-time, implementation means carrying out specific recommendations and continuing the planning process. The teacher must monitor the student's daily progress, with emphasis on *appropriateness* of the child's placement as well as *effectiveness* of the instructional techniques being employed. The teacher also must determine when additional assistance is needed and when to refer the student for reevaluation.

In addition, the teacher is responsible for maintaining student performance records. An important facet of maintaining records is to provide a *cumulative perspective* on how the student has progressed over a period of time. This allows for optimum review of how the student has responded to specific teaching techniques and materials. *Effective instructional planning depends on the availability of information on the student's performance in response to planned activities.*

IMPLICATIONS OF THE IEP FOR INSTRUCTIONAL PLANNING

The current national emphasis on instructional planning for exceptional children is directly related to requirements of PL 94-142. The law does not specify the planning process to be followed, but it does set forth detailed requirements on what should be included in an Individualized Education Program (IEP) and the conditions under which the plan should be developed. The law's intent is not to standardize instructional planning nor to promote a particular teaching methodology. The goal is to establish use of the IEP to bring about quality education for exceptional children and youth.

The law is explicit in its requirements that an IEP be developed for every handicapped child at the beginning of the school year and be reviewed annually. Once a child has been identified as handicapped, a conference must be held within 30 days for the purpose of developing the Individualized Education Program.

The IEP conference itself is equivalent to the fourth step in the above suggested sequence in instructional planning. *Preparation* for the IEP conference would include the earlier steps of identifying problems, initiating referral, and evaluation. Districts have used different terms to describe the conference. Many refer to it simply as the IEP conference; others call it the placement or Child Study Team conference (New Jersey) or the Administration Review and Dismissal (ARD) committee (Texas). (The latter is an attempt to reflect the main functions performed by conference participants.) Although school districts vary in how they arrange and conduct IEP conferences and in the design of IEPs, most have used the PL 94-142 requirements as a basic frame of reference. These requirements provide minimal standards for instructional planning, as a basis upon which to develop a systematic instructional planning process.

IEP Conference Requirements

From the perspective of team decision making, the conference concept is not new. Special educators have been using the team or conference approach to make placement decisions on exceptional children for many years. The changes created by PL 94-142, however, relate to the increased number of children involved, parent participation, and the requirements necessary for a written plan. In the past, conferences were held primarily in difficult cases or cases in which the child in question needed several special services. The number of conferences held by a staff depended upon program vacancies for children, the number of referrals, and the time available for staff conference participation. The result of most such conferences was a placement decision and general recommendations. Although parents may have been consulted, they rarely were invited to participate in the conference. Not uncommonly, the conference was lengthy or involved a series of sessions. Today, with the IEP requirement applying to all handicapped children, considerable attention must be given to efficiency in the use of time. It also means that careful decisions must be made regarding collection of data and organization of reports in advance of the conference.

School districts now are required to involve the following participants in all IEP conferences on handicapped children *(Federal Register, 8/23/77)*:

> **Sec. 121a.344 Participants in meetings.**
>
> (a) *General.* The public agency shall insure that each meeting includes the following participants:
>
> (1) A representative of the public agency, other than the child's teacher, who is qualified to provide, or supervise the provision of, special education.
>
> (2) The child's teacher.
>
> (3) One or both of the child's parents, subject to Sec. 121a.345.
>
> (4) The child, where appropriate.
>
> (5) Other individuals at the discretion of the parent or agency.
>
> (b) *Evaluation personnel.* For a handicapped child who has been evaluated for the first time, the public agency shall insure:
>
> (1) That a member of the evaluation team participates in the meeting; or
>
> (2) That the representative of the public agency, the child's teacher, or some other person is present at the meeting who is knowledgeable about the evaluation procedures used with the child and is familiar with the results of the evaluation.

The building principal frequently is the representative of the educational agency, but in some cases it is the director of special education or other administrative personnel. Regarding teacher participation, as many as three teachers commonly are involved. If a child is referred by a regular class teacher and subsequently is to be referred for placement in a resource room, both teachers will be involved. If the child is in a departmentalized program, each regular teacher may participate. This participation requirement strengthens the teacher's role and helps maintain an emphasis on instruction.

With reference to parent participation, districts must take extensive measures to encourage parents to participate. These considerations include scheduling the meetings at convenient times and maintaining effective communication with the parents. If parents refuse to participate, the conference can be held in their absence, but the district must be able to document its attempts to involve the parents and the latter's refusal to participate.

The decision on whether or not and how much to involve each student in the IEP conference is a difficult one. The intent is to have the child present by design, not arbitrarily. Of course, students should understand why changes are being made in their programs, but a discussion in the child's presence about his or her differences and needs for assistance is not always necessary. In the case of secondary-aged mildly handicapped students, valid reasons may exist for having the child present. Decisions regarding student conference participation probably are best made in consultation with the parents. "Other individuals" refers to speech therapists, psychologists, nurses, physicians, and other specialists whose expertise is related to the case being reviewed.

The conference's goal is to develop an IEP which is most appropriate for the student. But since time rarely permits involvement of all participants in more than one conference relative to a particular student, evaluative and related information must be available and effectively presented during the conference.

Each person involved must be prepared to participate. The person assigned to chair the conference is obligated to moderate the discussion in an objective manner and to encourage full participation. The emphasis, again, must be on developing an appropriate IEP for the student. One of the most difficult tasks faced by chairpersons of IEP conferences is helping the group reach agreement on the IEP. Two main strategies—staff preparation and communication with parents before the conference — will aid this decision making. Parents are expected to report their concerns and expectations for their child. It would be unfair to suggest that they will tend to be defensive, but in many cases they will need encouragement to participate, particularly in terms of their informative role. And school personnel lack experience in working with parents in making educational decisions, so the task may not be an easy one. Teachers, both regular and special, frequently will have the most difficult role. They must advocate the most appropriate IEP but at the same time may not have access to information acquired by the specialist until the time of the conference.

An important concern at this juncture is to guard against prematurely incorporating recommendations into the IEP merely to gain support from the parent or to reach agreement on the IEP. One must remember that the law does not hold the school liable if the child fails to achieve the IEP's objectives. Also, the risk is always present that an unreasonable expectation can emerge from an IEP conference. On the one hand, the IEP may exceed the student's capabilities or, on the other hand, the short-term objectives may exist already within the student's repertoire of skills. When participating in a conference, teachers need to keep in mind that they are responsible for implementation. If they knowingly agree to an IEP which they believe is not appropriate, they are not being fair to themselves or to the student. Although changes can and should be made when needed in the IEP after it is implemented, naturally it is best to begin with the most appropriate program possible. Teachers willing to assume advocacy roles can help guard against premature decisions in an attempt to reach agreement on the IEP. Because of the large number of conferences held and the time required to monitor IEPs, the potential hazard exists that the conference will become a routine meeting, with decisions made in advance and programs designed with such a low expectation level that the child will too easily attain the objectives — or unrealistic objectives may be included to fulfill parental expectations.

IEP Content

Because requirements regulating IEP content are clearly described, certain practices are common across most districts, although the format and scope of the IEPs vary substantially. Since most districts have not had extensive experience in applying the IEP concept, validated procedures have not been designed. Very few IEP models exist. Many districts have designed their own procedures and/or adopted available systems. In all cases, the first level of concern has been the degree to which the IEP format accommodates the required content. PL 94-142 specifies that each individualized program must include the following (*Federal Register*, 8/23/77):

> **Sec. 121a.346 Content of Individualized Education Program**
>
> The individualized education program for each child must include:
>
> (a) A statement of the child's present levels of educational performance;
>
> (b) A statement of annual goals, including short term instructional objectives;
>
> (c) A statement of the specific special education and related services to be provided to the child, and the extent to which the child will be able to participate in regular educational programs;
>
> (d) The projected dates for initiation of services and the anticipated duration of the services; and
>
> (e) Appropriate objective criteria and evaluation procedures and schedules for determining, on at least an annual basis, whether the short term instructional objectives are being achieved.

In reviewing the above content requirements, the plan clearly must be detailed; and the lack of existing resources should not be a limiting factor in recommending inclusion of the service. Teachers and support personnel should advocate for the services the student needs even if such services are not presently available. If they don't specify the services needed, handicapped children in many districts will never receive appropriate services. But if substantial delays are likely in gaining access to these services, alternatives should be considered, with the qualification that alternative services do not substitute for nor excuse the district from developing the desired services.

The IEP concept is a major improvement over most instructional planning practices and programs of the past, when planning centered on placement decisions. The improvement comes largely from requiring a written plan that includes evaluation procedures. Too often, students have been placed in programs with attention only to their eligibility. Now, equal emphasis must be given to describing specific program components. Hopefully, the IEP requirements will stimulate districts to employ systematic instructional planning procedures.

The IEP represents the primary vehicle in PL 94-142 for assuring quality education for the handicapped. It also provides a basis for assessing student performance and program effectiveness. Teachers now have support for establishing conditions conducive to planning, but they also must exercise their own professionalism to prevent the IEP from becoming a paper process which begins and ends with the IEP conference.

Suggested Steps for Developing IEPs

Although districts vary in the specific steps involved in designing IEPs, some general procedures are common to most districts. Two examples here will illustrate the IEP process. The reader is reminded that certain protective procedures apply to the IEP — e.g., parental permission for testing, and nondiscriminatory testing.

The first example directly refers to the general instructional planning steps previously described. Using these steps as a frame of reference, the instructional planning process can be related to developing IEPs. Figure 3.2 illustrates such an approach. The planning steps remain basically the same, with minor modifications to meet the unique instructional planning requirements of the IEP concept; and an additional evaluation step (6) has been included.

Step 1 *Identification of Learning Problems* remains the initial step in determining whether or not a student's problem is brought to the attention of appropriate personnel.

Step 2 *Referral* (this step remains essentially the same).

Step 3 *Evaluation* is broadened to include an extensive review of the available service alternatives required to meet the student's needs.

Step 4 *The IEP Conference* replaces the instructional placement decision step. Previously collected data and program needs are presented. A written plan is prepared.

Step 5 *Implementation* becomes a more comprehensive step in terms of the IEP, as the plan must be disseminated to all persons who will participate in the student's program. The plan is actually put into effect at this stage. Each participant is required to monitor the student's performance and to make any necessary modifications to the plan. This is the "service delivery" stage.

Step 6 *Evaluation* is repeated as a final step in the cycle. The intent is to determine student progress and the IEP's general effectiveness. During Step 3 the evaluation focus was on diagnosing the student's problem in preparation for recommending an IEP. During Step 5, the evaluation emphasis continues but focuses on achieving short-term objectives.In this step a deci-

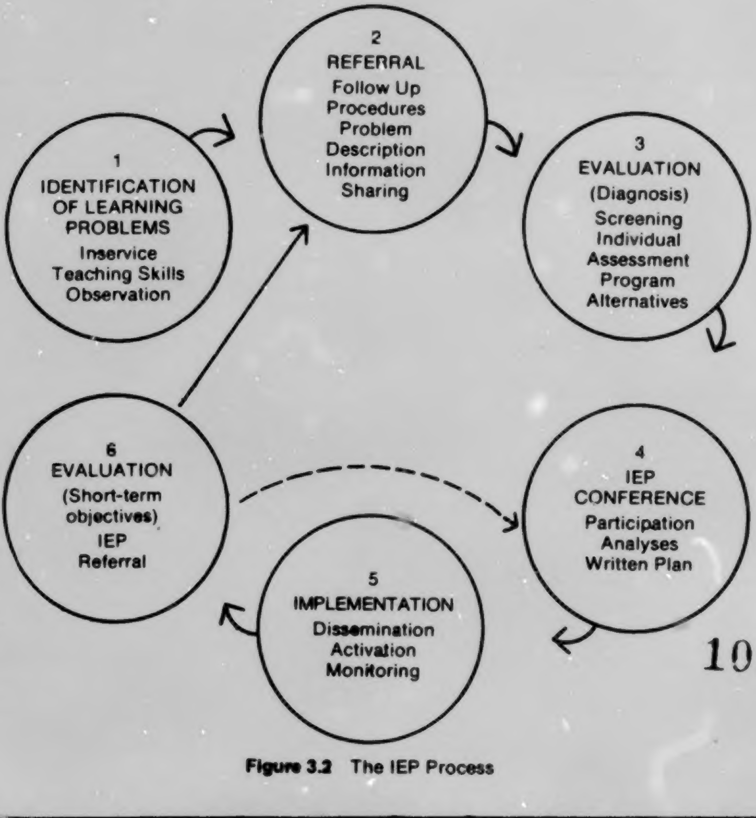

2
REFERRAL
Follow Up
Procedures
Problem
Description
Information
Sharing
1
IDENTIFICATION
OF LEARNING
PROBLEMS
Inservice
Teaching Skills
Observation
3
EVALUATION
(Diagnosis)
Screening
Individual
Assessment
Program
Alternatives
6
EVALUATION
(Short-term
objectives)
IEP
Referral
4
IEP
CONFERENCE
Participation
Analyses
Written Plan
5
IMPLEMENTATION
Dissemination
Activation
Monitoring

Figure 3.2 The IEP Process

> sion must be made on the IEP's overall effectiveness. The decision may be to continue the IEP with minimal modification, or to initiate a referral to obtain additional evaluation services. In the latter case, Step 2's referral process will be repeated. In other cases, procedures may call for holding another IEP conference; this generally occurs when the original IEP is considered tentative and the committee desires a report at a particular time. Primarily, Step 6 is intended to satisfy the annual evaluation requirement, but in most cases evaluation should be carried out on a more frequent basis.

The flow chart in Figure 3.3 illustrates a second approach, involving a series of steps oriented to a "Placement Committee" function. This example is taken from a publication by the National Association of State Directors of Special Education (1977) designed to provide clarification on the protective procedures inherent in PL 94-142 and guidelines for developing IEPs. The steps suggested by this example center on three primary types of information — eligibility information, planning information, and placement options. These functions are similar to those described in Steps 2 and 3 of the previous example; the example in Figure 3.3 also begins with referral procedures and ends with an emphasis on evaluation (i.e., a decision or change in placement/programming). The model illustrates the kinds of decisions involved in developing an IEP and the sequence in which the decisions logically are made.

For districts to monitor the effectiveness of developing, implementing, and evaluating procedures relative to IEPs, they have become aware of the necessity to rely on specially designed forms, which may be self-designed, modified or adopted from available systems. Well designed forms allow for efficient collection and assessment of essential information without placing undue demands on teachers. Unfortunately, special education programs have a history of creating sometimes unnecessary forms that may have been *too* comprehensive. Consequently, the use of forms often is suspect. The IEP, however, *requires* a recorded plan; thus, special forms now are necessary.

The written plan serves at least three purposes: (1) It provides a permanent source of information on the student's plan which can be shared with parents, as well as with the teacher and other personnel responsible for implementing the student's program; (2) It provides a reference regarding instructional decisions made on a particular student's program; and (3) It creates a cumulative data base for future program planning for individual students. Forms are important because

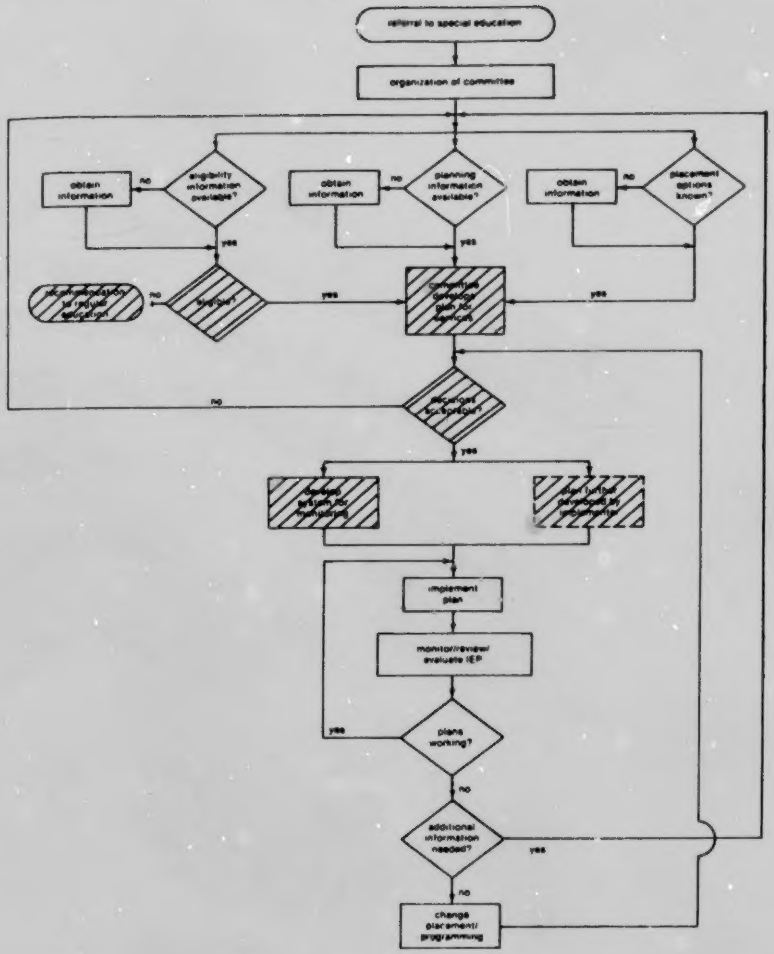

referral to special education
organization of committee
eligibility information available?
no
obtain information
yes
planning information available?
no
obtain information
yes
placement options known?
no
obtain information
yes
recommendation to regular education
no
eligible?
yes
committee develops plan for services
no
decisions acceptable?
yes
develop system for monitoring
plan further developed by implementer
implement plan
monitor/review/evaluate IEP
yes
plans working?
no
additional information needed?
yes
no
change placement/programming

Figure 3.3 Developing the IEP

From: *Functions of the Placement Committee in Special Education: A Resource Manual*, 1976, by the National Association of State Directors of Special Education, 1201 16th Street NW, Washington, DC 20036.

districts must maintain records containing data on the IEPs — when they are developed and initiated, and evaluation data on their effectiveness. The traditional cumulative record of information ranging from test scores and anecdotal comments to attendance records is no longer sufficient or appropriate.

Designing selected forms for use in recording and monitoring the IEP necessitates an understanding of the IEP concept and the district's philosophy toward instructional planning. A system of forms can be designed which meets requirements of the law regarding IEPs but still not have a positive influence on the student's program. If attention is given only to administrative procedures or to minimal content requirements, the consequence may be a written plan which falls short of promoting quality instruction. Following are guidelines to be considered in designing or selecting forms for use with IEPs. The emphasis is on a *system* of forms rather than isolated forms for individual purposes. Particular attention has been given to suggestions which strengthen the teacher's role in the implementation stage.

Guidelines for IEP Form Design

1. *Accommodation of Full Service Information.* The forms must be designed to allow for specifying of plans for the entire range of services which a student may require. For example, a mildly handicapped student's plan may include objectives and evaluation data in the areas of academic skills, language skills, social behavior, and psychomotor tasks.
2. *Content Flexibility.* As objectives are specified, the IEP begins to include program content, but the forms themselves should not dictate the content. For example, some districts have designed forms that include skill checklists; skills considered appropriate for each student are checked, representing objectives. Such an approach is restrictive in that all skills cannot be listed. These forms also contribute to decisions which are not appropriate to the student's needs. Better, teachers should be allowed to develop specific objectives based on their knowledge of each student's needs.
3. *Emphasis on Retrieval of Program Related Information.* In designing forms, the temptation may be to request information because it is

interesting, of possible future use, or simply accessible. But the primary objective should be to elicit information related only to student program needs. Since IEPs for most students relate to educational services, the design should emphasize retrieval of instructionally related information.

4. *Effectiveness without Repeated Use.* Forms used in the implementation stage should not require constant use. If the teacher or specialist is required to record information on a regular, daily basis, or on every task in a therapy session, more time will be involved in recording than in instruction. Consideration of the teacher or other specialist's time is critical to the design of an effective system. Information must be recorded while the IEP is being implemented, but this should be accomplished without excessive time demands on the staff.
5. *Provision for Full Participation.* Most IEPs necessitate the involvement of two or more professionals (i.e., regular teachers, special teachers, and/or specialists). The system must encourage their full participation. A primary requirement is that the system provide a communication basis among participants; they should be able to exchange information on the student's performance.
6. *Utilization without Extensive Training.* This guideline is almost a commandment. If the system is so complicated or detailed that extensive training is required for its use, it likely will not be successful. Again, time is a factor. If a system is complicated, it probably will be difficult to implement. Because regular educators as well as special educators are involved in implementing IEPs, various persons must understand the system. The amount of training required to understand and use the form system should be minimal. This is not to suggest that the system should be so simple that it becomes of little value, but it does suggest that serious attention should be given to any training requirements for implementation. A good system need not be complicated.
7. *Cumulative and Program Based Qualities.* The form system must allow for collecting information on the student's program in those areas identified in the IEP. If this is accomplished, cumulative information will be available as a basis for making decisions on IEP changes. Too many form systems require only the recording of data regarding whether or not the IEP was implemented and its effects on student performance. If the goal is to improve as well as judge instruction, a more continuous approach to recording information is required.

8. *Sustaining Nature.* A major investment of time, effort, and resources is involved when a district designs or adopts a form system. Little is gained if changes routinely are made in the system after it has been initiated. Consideration should be given to reducing the likelihood of having to make changes each year. Some modifications are almost inevitable over time, and supplementary forms may be necessary additions, but to the fullest extent possible, uniformity and continuity should be maintained after a system has been initiated.
9. *Format Considerations.* Readable, understandable forms are highly desirable wherever they are used. A well-designed form is innately helpful, but someone also should be available to assist or clarify the use of the IEP system forms.

For purposes of illustration, an existing IEP form system will be discussed. The Instructional Based Appraisal System (IBAS, Meyen, 1976) represents an approach to the IEP concept, with emphasis on the instructional (i.e., implementation) stage. The instructional emphasis is compatible with the IEP's intent but probably goes beyond what is minimally necessary in terms of required accountability measures. The IBAS system is comprehensive and includes several banks; some forms intentionally are not included here (for example, parental consent forms for testing, summary forms for recording IEP conference transcripts, and parental agreement forms on which parents indicate their agreement on the IEP).

Each school should identify the functions of such standard forms and identify them with the school. In many cases, forms for these purposes could be printed on district letterhead and could include descriptive information specific to that district. The IBAS forms relate to the major elements of the IEP concept and are intended to be generalizable across districts.

Six forms comprise the IBAS system. With the exception of one form, they are completed annually or, at most, quarterly. The exception is Form 3, the Teacher's Instructional Plan (TIP) Form. Monitoring of the IEP is accomplished primarily through the routine use of this form.

Form 1 *Diagnostic Information Worksheet* (Figures 3.4-3.9)

This form is designed to assist the person responsible for diagnostic evaluation in organizing evaluation information. It is a six-page, foldout form which contains provisions for recording referral information, test data (e.g., intelligence, achievement, diagnostic), and correlated test results, informal assessments, and observations.

Side six (Figure 3.9) of the form contains a summary sheet, providing a profile for recording descriptive information, evaluation results, and summary statements based on evaluation and observations. (This form is actually a supplement to IBAS in that it is not required; it is merely an organizer for the evaluator.) The form can be shared with IEP conference participants or it can be used by the evaluator as a reference. The form is not totally appropriate for use with severely handicapped children; more appropriate data will need to be added on a supplemental form.

Form 2 *Educational Program Plan* (Figures 3.10 and 3.11)

This is the first IBAS form to be completed as part of the actual IEP. It represents the IEP's general statement and is filled out during the IEP conference. The form is printed as a file folder, allowing it to serve as a divider in the student's cumulative IEP file, as well as to store related information, correspondence, etc.

Side 1 (Figure 3.10, top) contains provisions for recording and identifying student information, the placement decision, and conference team members.

Side 2 (Figure 3.11) opens up and expands to two pages to provide space for recording an assessment profile of the student's performance, observation data, analysis of skills and behaviors, suggestions on instructional strategies, and suggestions on presenting instruction, (i.e., methods and media). The Assessment Profile is the same as included in the Diagnostician Worksheet—this is done to enhance the information sharing process.

Side 3 (Figure 3.10, bottom) provides for annual goals, three-month goals, and comments. The intent is to focus the attention of conference participants on long-term goals. The reference to three-month goals is to arbitrarily suggest that, at a minimum, the general goal should be reexamined at least every three months.

By itself, this form is not an IEP, but it does stimulate instructional decisions, and it complies with most of the IEP requirements. For example, it allows for recording the student's current performance level, annual goals, educational services such as placement and media, as well as date of goals, listing of persons responsible for program plans, and additional information essential to instructional planning. It does not include short-term objectives and evaluation procedures. In fact, the form does not provide specific directions of an instructional nature. These have been intentionally separated and included on a separate form (Form 3, described below).

Lecture Transparencies Set No. 1

"The IEP: What It Is and What's Happening In The Schools"

The transparencies are merely suggestions for guiding your presentation and for stimulating discussion. You may wish to use them as is, edit, or to prepare your own. To use them effectively will necessitate your being familiar with the prerequisite material identified in the module.

1.a IEP requirements of PL 94-142
1.b Elaboration on requirements
1.c IEP process (simplification of general steps)
1.d IEP elaboration on IEP steps
1.e IEP observation - comments on what appears to be happening in local districts
1.f Research Reminders - comments derived from research studies
1.g IEP teacher knowledge - areas in which teachers need to develop skills
1.h IEP Parent Involvement - general areas of parental responsibilities

INDIVIDUALIZED EDUCATIONAL PLAN

A. CONFERENCES

SCHOOL REPRESENTATIVE

TEACHER

CHILD

OTHERS

PARENTS??

B. PRESENT LEVEL OF PERFORMANCE

C. SHORT TERM OBJECTIVES

D. ANNUAL GOALS

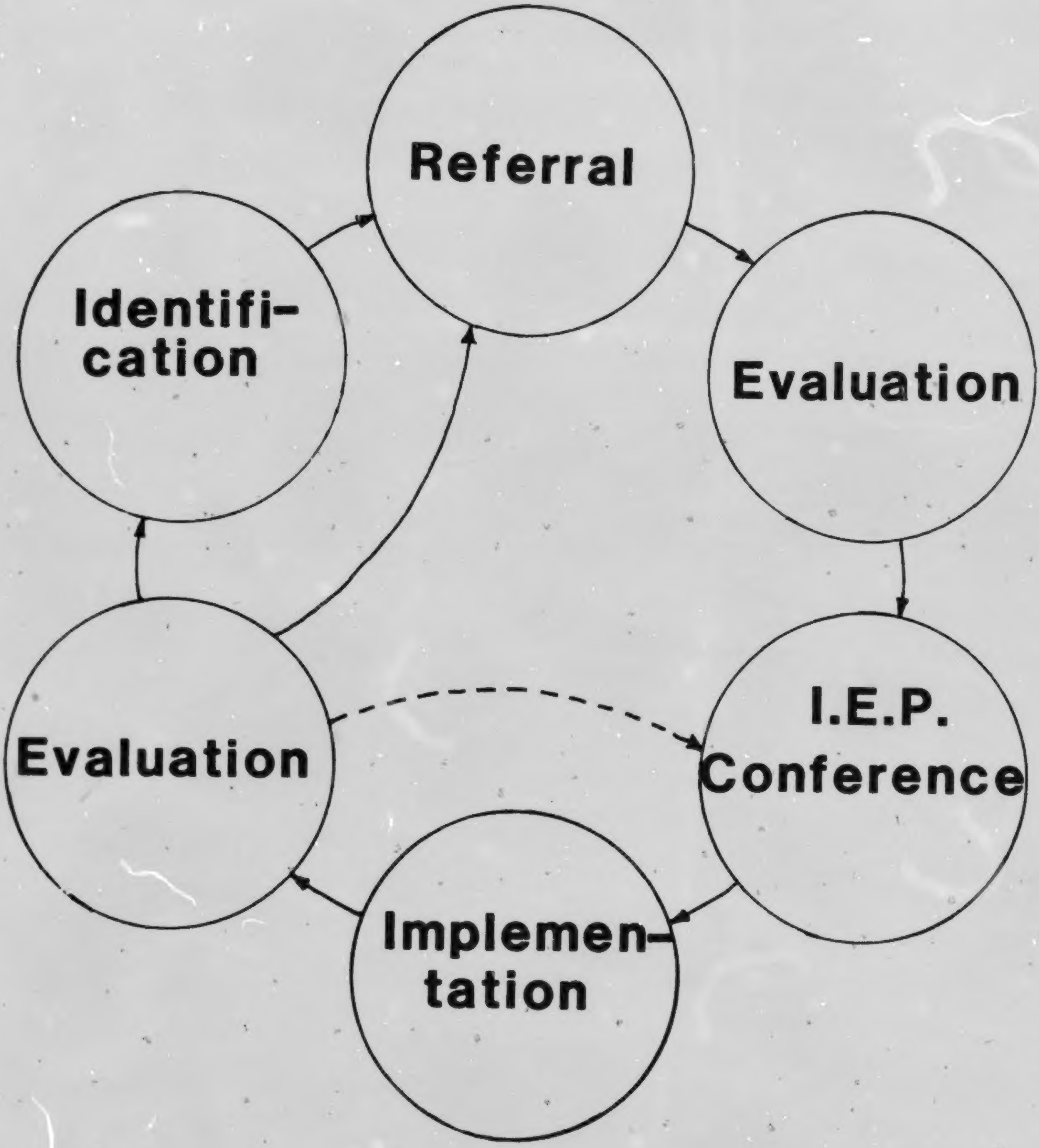
E. EDUCATIONAL SERVICES

F. TIME LINE

G. EVALUATED AT LEAST ANNUALLY

SERVICE
PRESENT LEVEL- PERFORMANCE
ANNUAL GOALS
SHORT TERM OBJECTIVES
TIME LINE
IN CONFERENCE
EVALUATION

I.E.P. PROCESS



Referral

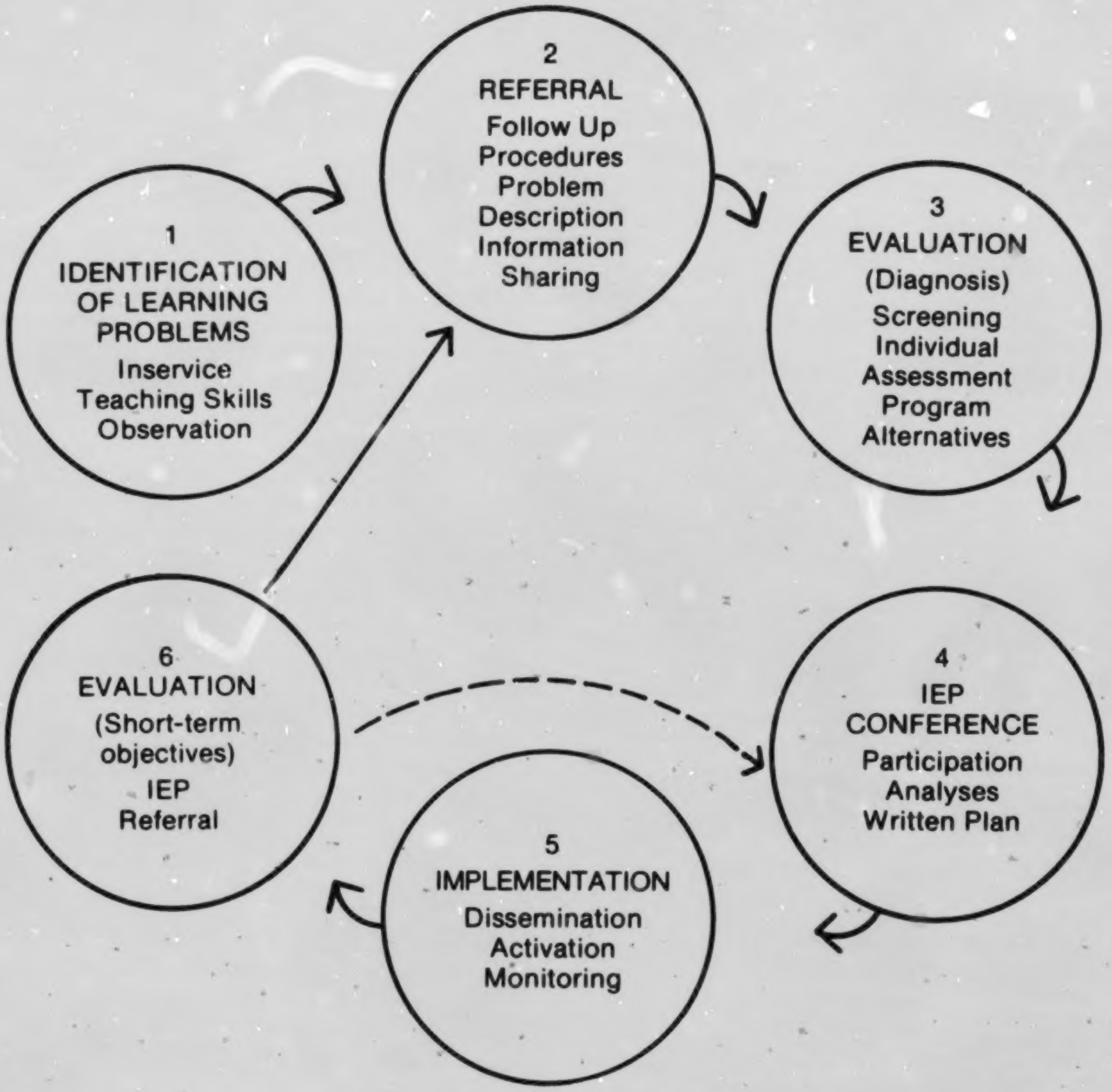
Evaluation

I.E.P. Conference

Implementation

Evaluation

Identification



2
REFERRAL
Follow Up
Procedures
Problem
Description
Information
Sharing
1
IDENTIFICATION
OF LEARNING
PROBLEMS
Inservice
Teaching Skills
Observation
3
EVALUATION
(Diagnosis)
Screening
Individual
Assessment
Program
Alternatives
6
EVALUATION
(Short-term
objectives)
IEP
Referral
4
IEP
CONFERENCE
Participation
Analyses
Written Plan
5
IMPLEMENTATION
Dissemination
Activation
Monitoring

Figure 3.2 The IEP Process

Text page 131

I.E.P. OBSERVATIONS

Compliance Response
Plan too often the goal
Agreement on plan does not
  assure implementation
Too much emphasis on academics
Available services too restrictive
Time restraints
Attitudes

RESEARCH REMINDERS

ATTENDANCE DOES NOT EQUAL PARTICIPATION

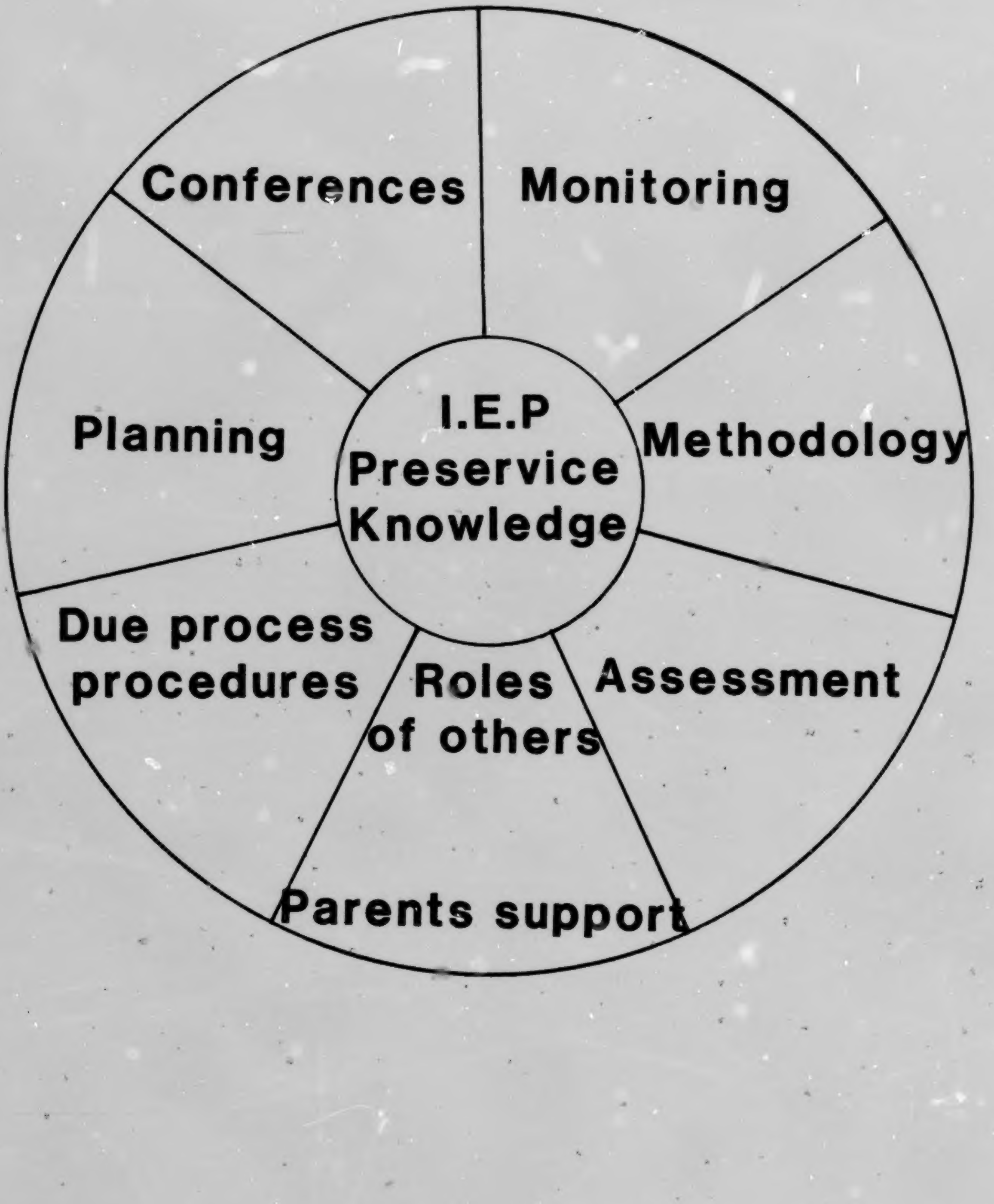
HIGH ACCEPTANCE EQUALS HIGH PARTICIPATION

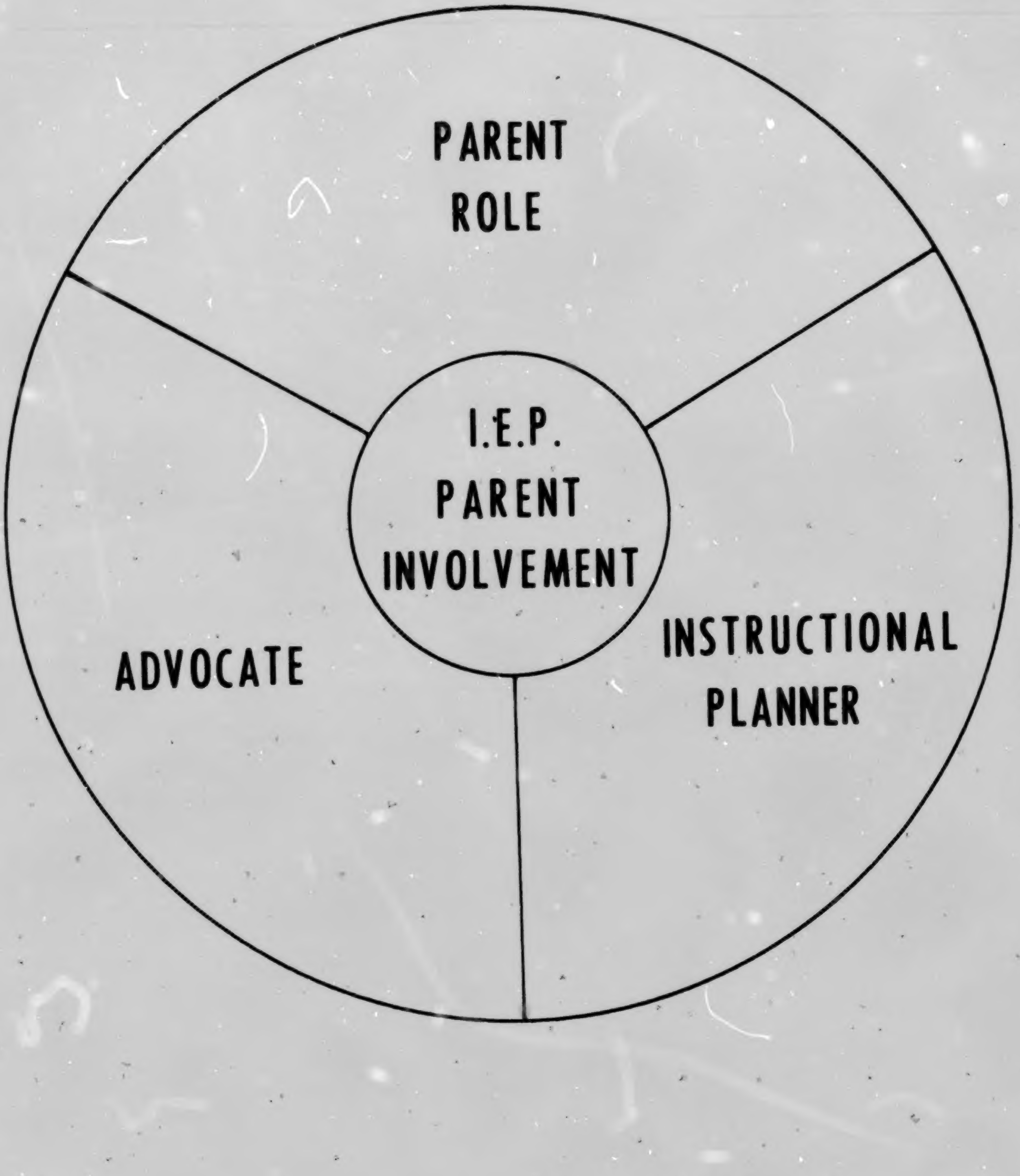
TEACHERS ARE LOW IN PARTICIPATION

REGULAR TEACHERS DO NOT PERCEIVE A MAJOR ROLE FOR THEMSELVES

EDUCATORS LIMIT PARENTAL INVOLVEMENT IN PLANNING

I.E.P. PLANNING ROLES ARE CONFUSED


I.E.P
Preservice
Knowledge
Conferences
Monitoring
Planning
Methodology
Due process
procedures
Roles
of others
Assessment
Parents support



PARENT ROLE

I.E.P. PARENT INVOLVEMENT

ADVOCATE

INSTRUCTIONAL PLANNER

AN APPROACH TO OPERATIONALIZING THE I.E.P.

Floyd G. Hudson and Steve Graham

PL 94-142 specifies that schools are required to develop an individual Educational Program (I.E.P.) for every handicapped child before services are provided. PL 94-142 does *not*, however specify *how* the I.E.P. is to be developed and implemented. This paper presents a comprehensive, step-by-step procedure for the I.E.P. The authors provide sample forms for all development and implementatin phases of the I.E.P. as well as suggestions for using the I.E.P. as an effective educational management tool for learning disabled youth. —*D.D.D*

On November 28, 1975, President Ford signed into law the Education for All Handicapped Children Act, PL 94-142. As a result, schools in every part of the nation will feel the impact of this legislation. It establishes the right of the handicapped to a free and appropriate education.

Within the law, the critical link between the handicapped student and the free and appropriate education he or she is entitled to is the Individual Educational Program (I.E.P.). As a management tool designed to facilitate the process of instructional delivery, the I.E.P. is a written document developed jointly by school personnel, the student's parents or guardians, and, where appropriate, the student himself/herself.

Due to the complexity and practical importance of the I.E.P., a systematic planning model is necessary. The purpose of this paper is to present a guide for the development and implementation of the I.E.P. First, an overview of the process involved in providing services to handicapped children will be reviewed. This overview, which specifies the steps preceding the writing of the I.E.P., will be followed by an indepth, step-by-step presentation of the development and implementation of the I.E.P.

OVERVIEW OF SERVICES FOR HANDICAPPED STUDENTS

Since no set pattern has been followed by state or local school districts in identifying, assessing, and providing services to handicapped students, service arrangements have varied greatly from one locale to the next. However, with the enactment of PL 94-142 specific service arrangement guidelines were established providing each state and local school district with a set of procedural policies which must be followed from the initial step of identification through service delivery. Although variance will continue to exist between the service arrangements of different school districts, the outline presented in Figure 1 illustrates a common format.

The initial step in providing special education services is to determine who is eligible. A student may become a concern when he or she does not conform to academic and/or behavioral expectations and is consequently brought to the attention of the school by a referral from a teacher, parent, or other interested persons (Step 1).

Upon receiving a referral, a representative of the school district (i.e., school principal) records the date, the reason, and the initiator of the referral. The special services department is then informed of the referral and a school representative notifies the parents of the school's concern (Step 2).

Next, school personnel (i.e., screening team) collect information on the student's current and previous learning history (Step 3) which is then reviewed by a screening team who decides whether or not additional information is warranted. Should the team decide that a comprehensive assessment is indicated, permission to do so is requested from the parents via a signed written consent letter (Step 4). The consent letter explains why additional information is needed, who will gather it, whose decision it was, and when the assessment will be completed.

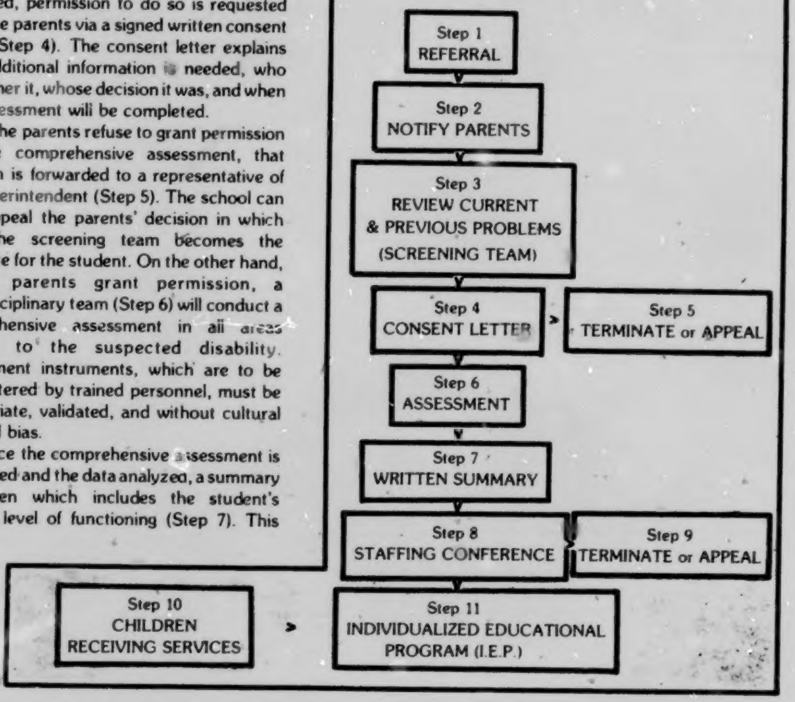
If the parents refuse to grant permission for the comprehensive assessment, that decision is forwarded to a representative of the superintendent (Step 5). The school can now appeal the parents' decision in which case the screening team becomes the advocate for the student. On the other hand, if the parents grant permission, a multidisciplinary team (Step 6) will conduct a comprehensive assessment in all areas related to the suspected disability. Assessment instruments, which are to be administered by trained personnel, must be appropriate, validated, and without cultural or racial bias.

Once the comprehensive assessment is completed and the data analyzed, a summary is written which includes the student's present level of functioning (Step 7). This summary must be signed by a representative of the school and the responsible team members as an indication that the report is accurate and reflects their own conclusions. In case of dissentors, separate statements should be submitted.

Upon completion of the summary statement, the parents are contacted to set a mutually agreed upon time and place for the staffing conference (Step 8). Staffing participants include those persons who conducted the assessment, representatives of the school district, the student's teacher (regular and/or special), parent or parents, and, when appropriate, the student. The

FIGURE 1

FLOW CHART OF SERVICE ARRANGEMENTS



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information previously gathered is reviewed and a decision rendered on whether or not the student will receive special education services. If the parents disagree with the assessment summary or the proposed special service recommendation, they are informed of their rights to appeal the decision (Step 9).

The final step in the process is the development and implementation of the I.E.P. (Step 11). For those students already receiving special education services (Step 10), an I.E.P. must be developed prior to October 1 of the new school year. For newly identified handicapped students, a meeting or series of meetings to develop the I.E.P. are scheduled (time samples indicate that it takes approximately ten hours per student to develop a written I.E.P.). Once the I.E.P. is operationalized, additional sessions will be necessary to develop implementation strategies and to monitor the I.E.P.

THE INDIVIDUALIZED EDUCATION PROGRAM

The guidelines of PL 94-142 requires that an I.E.P. be in effect for each handicapped student before he or she receives special education and/or related services. If a student is scheduled for special education services before the school year begins, the I.E.P. must be developed by October 1st. However, if a determination is made that a student needs special education and/or related services following the start of the school year, an I.E.P. must be developed within thirty calendar days of that decision.

As mentioned earlier, the I.E.P. is a management tool designed to assure that a handicapped student receives an education appropriate to his or her needs and that this education is actually delivered and monitored. As required by law, an appropriate education is one which can reasonably be expected to achieve the agreed upon annual goals and short-term objectives stated in the I.E.P.

Development of the I.E.P.

The first part of the I.E.P. is the development of the individualized education program. Each school district is responsible for initiating and conducting meetings for the purpose of developing, reviewing, and revising a handicapped student's I.E.P. After a determination has been made that a student is to receive special education and/or related services, a representative of the school district is responsible for setting up a meeting or series of meetings to develop the I.E.P.

To insure that they will have an opportunity to attend the staffing conference, the student's parents must receive advance notice of the purpose, time, and location of the meeting as well as who will attend. The school district is also responsible for insuring that the parents understand the proceedings of the meeting, including an interpreter for parents who are deaf or whose native language is other than English. Furthermore, the meeting must be held at a mutually agreed on time and place and if neither parent can attend, the school district is to use other methods to insure parent participation (e.g., individual or conference telephone calls). A meeting may be conducted without parent participation if the school representative is unable to convince the parents to attend. If this is the case, the district must have a record of its attempts to arrange the meetings, including accounts and results of telephone calls made or attempted, copies and responses of correspondence sent to parents, a list of the results of home and employment visits, and an I.E.P. parent attendance waiver form. The waiver, which is to be signed by one or both parents if they cannot attend the I.E.P. meetings, indicates that the parents have been informed of their rights, that systematic attempts were made to arrange a mutually agreed upon time and place for the meeting, and that the school will inform the parents of their recommendations as a result of the I.E.P. meeting.

Besides the parents, each I.E.P. meeting should include a school representative qualified to provide or supervise special education provisions, the student's teacher or teachers (general, special, or both) the student (when appropriate), and other individuals at the discretion of the parent or the agency (i.e., speech therapist, physician, etc.). For the handicapped student who is being evaluated for the first time, a member of the assessment team or one who is familiar with the assessment and its results should be present.

The development of the I.E.P. consists of the following stages: (a) statement of the student's present level of performance, (b) establishment of priorities, (c) a determination of services to be delivered, and (d) specification of evaluation procedures. First, the student is identified as not meeting academic and/or behavioral expectations and the areas of concern are delineated and investigated. An indepth assessment of all areas related to the student's suspected disabilities is conducted resulting in a summary document which includes the student's present level of functioning, strengths and weaknesses, and unique learning needs. These assessment data and the student's individual needs form the basis for a determination of educational and related priorities. Once the student's needs are determined, a means of meeting them is agreed upon. It should be noted that it is inefficient to have the complete staffing team write the annual goals, short-term objectives, and evaluation procedures. Ideally, the teachers implementing the plan should be charged with this responsibility. Furthermore, to insure that these services are being delivered appropriately, a monitoring system is established. Information from the monitoring process is fed back into the system. If necessary, suitable adjustments are made in the student's educational program.

Implementing the I.E.P.

After priorities, services, and evaluation criteria are established, the plan becomes operational and implementation of the I.E.P. begins to take place. The I.E.P. committee is primarily responsible for the development and monitoring of each handicapped student's educational program, whereas individual implementers (i.e., teachers and specialists) must specify daily activities and strategies necessary for the plan to be functional. At the implementation level, objectives are derived directly from the annual goals and short-term objectives in the I.E.P. The written program cannot be thought of as a static one-time contrivance but must be viewed as a flexible response to the changing needs of the student. As implementers note needed additions, deletions, and changes in the I.E.P., this information should directly influence the committee's monitoring activities and planned adjustment.

Before the I.E.P. can become fully operational, administrators, educators, and parents must comprehend each component of the process and its relationship to the whole. Therefore, the following sections of this paper will discuss in detail the nature and ramifications of each stage in the development of the I.E.P.: present level of performance, establishment of priorities, delivery of services, evaluation procedures, and implementation.

ESTABLISHING PRESENT LEVEL OF PERFORMANCE

The procedure through which the present level of performance is established will vary from one school district to another. However, an appropriate, systematic procedure would take into consideration the following essential elements: student, referral, instructional history, assessment, and summary document.

Student. To insure that every student is indeed provided an appropriate education, it is important that as many professionals as possible within the school have adequate knowledge of what constitutes a handicapping condition and what steps must be taken to refer such a student for special services. Most often regular teachers and/or parents identify students suspected of being handicapped, but it is obvious that the referral process will be strengthened and thus better services extended to a student if all professionals coming into contact with the student have an adequate knowledge of handicapping conditions and criteria for referring students for special services.

Referral. Traditionally, referrals have been diagnostically nonmeaningful; thus, their importance in the assessment process has been overlooked. Often verbal referrals were made as teachers and principals pass in the hall, while written referrals frequently were simplified to the point that only the name, age, grade level, school and teacher's name were given. While such referrals are of little value in the diagnostic evaluation of any student, it is quite obvious that comprehensive diagnostic referrals are particularly crucial when dealing with students experiencing difficulty in learning.

Ideally, the diagnostic referral documents, the student's instructional history, previous instructional problems, curriculum-related strengths and weaknesses, and non-academic behaviors as viewed by the referring teacher. This form of diagnostic information tends to give direction to the screening team by focusing on important or suspect areas of performance. Following an analysis of a comprehensive referral, the screening team can prepare a strategy for completing necessary and essential assessments.

Instructional History. Information about the instructional history of the referred student can be obtained through the referral form, student's cumulative folder, and interviews with teachers, parents and significant others with knowledge of the student. Basic to such a review is information reflecting:

1. assessment data (formal)
    - psychological
    - educational
    - emotional
    - social
2. academic skills (strengths and weaknesses)
3. behavior observations
4. previous learning history
5. relationships of behavior to learning
6. previous instructional methods used
7. previous instructional techniques used
8. previous instructional materials used
9. learning style
10. interpersonal relationships (peers, teachers, and others)
11. unique learning needs
12. related, physical-sensory conditions

Once the instructional history has been completed, a summary document should be prepared to assist the screening team in making decisions related to the selection of appropriate assessment strategies.

Assessment. After having completed an analysis of the referral and a review of the student's prior learning experiences, the screening team either accepts or rejects the referral. If the referral is accepted, a specific assessment plan is designed for the student.

No attempt is made to administer a "set" battery of tests. However, assessment instruments and techniques are selected based on the information related to the specific learning and instructional needs of the student. Generally, the instruments used must be: (1) reliable and valid, (2) appropriate to the specific areas of assessment and (3) appropriate to the individual student's cultural and language background. Assessment techniques used should be documented through research and/or other professional sources.

At this point, the team must request permission from the student's parents or guardians to obtain additional information about their child, determine who is to conduct the assessment, establish criteria for performance, and determine how the information is to be communicated. In addition, the parents are to be given the reason for this request and notified who initiated it.

After reviewing all relevant presenting data, the team determines the specific areas to be assessed. Generally, an analysis of the learner constitutes the major assessment process; however, this oversimplified approach has led to limited success in program planning for children. Therefore, it is obvious that consideration of other variables is essential to successful implementation and maintenance of the I.E.P. Thus, in addition to an analysis of the *learner* using formal and informal techniques, the team must be equally concerned with an analysis of the *instructional environment* and the *instructional variables* which may inhibit or enhance the learning behavior of the student. Chief among these are: the classroom environment (physical-emotional), teacher's attitudes, curricular organization, instructional materials, reinforcement strategies, methods of matching student needs to instruction, and interpersonal relationships with teachers, peers, and others.

Although the regulations in PL 94-142 stipulate initial and annual evaluation, this is considered a minimal standard. Most special educators advocate continuous assessment in order better to monitor the student's progress and the effects of the I.E.P. in maintaining appropriate behavior.

Summary Document. The final step in determining the present level of performance is the development of a comprehensive document integrating all known data relative to the student's present level of performance. In order to secure functional application in developing the I.E.P., criteria for developing this document must be established. The major criterion is a statement integrating complete, concise, objective data easily translatable into annual goals and short-term objectives. Additional criteria will deal with the following topics: Will the document facilitate the staffing process? Does it coordinate information from multiple disciplines? Does it serve the communication among staffing participants?

ESTABLISHMENT OF PRIORITIES

Once the present level of functioning, unique learning needs, strengths and weaknesses, etc., have been determined, the next task in developing the I.E.P. is to establish priorities, i.e., determine which skills are most in need of educational attention. Because it will not be possible to work simultaneously on all the strengths and weaknesses identified during the assessment, the team must decide which instructional skills to include in the I.E.P. and state these in terms of annual goals and short-term objectives. Such specification is advantageous for the following reasons:

Written goals and objectives direct the teaching process by establishing which critical skills are to receive educational attention, thus, better enabling the teacher who implements the I.E.P. to prepare lessons geared to the student's needs. In addition, each instructional activity can be planned to strengthen a specific goal or objective. The result is intentional learning.

Written goals and objectives can motivate both the teacher and the student. Since the purpose of the instructional activities is shared with the student, the relevancy of the task is made more meaningful. Once students know what, why, and how they are to learn, they will be encouraged to try harder. By specifying what is to be learned, written goals and objectives are motivating to teachers and result in direction and structure.

Written goals and objectives provide accountability by specifying what is to be learned within a specific time period. Teachers, administrators, parents, and the student are provided with a means of evaluating advancement along a continuum of progress. Performance in terms of goals can be examined to determine if progress is satisfactory.

Written goals and objectives facilitate team communication because each team member has a common point of reference. By specifying goals and objectives, each team member is aware of the critical areas in need of attention. When team members formally and periodically share information their thoughts will be directed toward a common set of goals.

In systematically establishing priorities the following six principles must be followed: Focus on the reason for referral.

Examine the student's present level of performance and note general areas in which progress is inadequate.

Examine the student's present level of performance and note areas of strength.

Determine what critical areas each team member considers to be educational priorities.

Examine each critical area with regard to the student's age, grade, rate of learning, amount of learning, likes, dislikes, strengths, weaknesses, abilities, etc.

Determine the prerequisite skills necessary to obtain more advanced skills in each critical area.

The determination of priorities is a decision-making process. It moves from general areas to specific goals. First, the team focuses on the academic and/or behavioral difficulties that led to the referral. Suspected and related areas of disabilities should be examined with this focus in mind. For example, in examining the assessment data and summary report of a student referred because of a reading problem, the team should center its attention on the referral problem (i.e., reading).

Once the referral problem is established, the student's present level of functioning is examined and general areas in which progress is satisfactory or inadequate are noted. In this connection it is often helpful to have a list of academic and behavioral subskills on hand to enable the team to consider a wide number of skill areas and insure that the team zeroes in on general goals, while not overlooking important subcategories. The following is a partial list of content areas that might be examined:

a) *Reading Skills* - readiness, word attack, word recognition, vocabulary, and comprehension.

b) *Language Arts* - listening, speech, grammar, handwriting, writing, and spelling.

c) *Arithmetic* - numeration, addition, subtraction, multiplication, division, fractions, measurement, and time.

d) *Social Skills* - self concept, self help skills, interpersonal relationships, and self control.

e) *Thinking Skills* - comprehension, concepts, and problem solving.

f) *Behavioral Skills* - task completion, attention to task, hyperactivity, independent work, group participation, following directions, type/frequency of reinforcement, feedback, supervision necessary, preparation for work, time orientation, planning skills, aggressive/passive, handling of criticism, leadership, and rate of production.

After the general areas to be examined are determined, the team decides if progress in those areas is satisfactory or inadequate. Since "satisfactory" and "inadequate" are both relative terms, the student's present level of functioning in each general area is compared to a standard. Generally, there are three types of standards: norms, skill lists, and intra-individual scores. In utilizing norms as a standard, the student's present level of functioning is compared to scores from a population of students. With a skill list comparison between the student's present level of functioning and a fixed level of skill development is made; whereas intra-individual comparison contrasts the student's scores one against the other. One or a combination of these standards might be applied.

Once the general areas of strengths and weaknesses are determined, the next step is to target which general areas to incorporate into the annual goals. Since the parent, the regular classroom teacher, the specialist, etc. all view the student from a different perspective, it is expected that the team members will not select the same priorities. However, each area identified as a possible priority is examined and discussed.

For each critical area there are a number of conditions and constraints that will need to be investigated such as the student's grade placement, rate of learning, amount of learning, and previous teaching methods. For example, the goals for a fourth-grade student who has demonstrated a rapid rate of learning while receiving remedial instruction will be different from the goals for a similar student who has not responded adequately to remedial instruction. Similarly, the goals for a 17-year-old learning disabled student who cannot read will be different from the goals of a third-grade learning disabilities student unable to read. If it is known that the 17-year-old has received intensive remedial reading instruction during previous school years and made little progress, the team should consider alternatives to remedial reading.

the student's intellectual, social, and physical capabilities, level of motivation, and interests. The goals for a student with sensory deficits will be different from the goals for a student with depressed intellectual functioning. A highly motivated student working on skills that interest him will have different needs than a student who lacks interest and motivation.

Finally, the degree of severity of the disability and the type of services the student will receive must be considered. A correspondence should exist between the number of goals set and the amount of time available for instruction. Likewise, consideration should be given to where the goals will be met (i.e., regular class, resource room, etc).

With the above considerations in mind, the team will select those target areas most in need of educational instruction. For each selected area, scope and sequence charts and/or criterion skills checklists (i.e., Fountain Valley, Read On, Wisconsin Design, etc.) can be utilized to determine which skills the student has or has not mastered at his present level of functioning. Skills which the student has mastered, not mastered, or does not have at this level should be noted. Also, the prerequisite skills necessary to obtain a higher level of skill development should be determined. For each priority area, the prerequisite skills to be taught can then be arranged in the order in which they appear on the scope and sequence chart, thus insuring that prerequisite subskills will be developed before higher skills are taught.

Up to this point, the team has established general areas in need of remediation and maintenance. Furthermore, prerequisite skills in each of the priority areas have been delineated. The next step is to transform this information into annual goals and short-term objectives.

Annual Goals. When writing annual goals the team determines the competency to be demonstrated by the student on a skill cluster by the end of the school year. Clearly such judgments are difficult and, at best, annual goals are group estimates which may over- or underestimate a student's progress. To insure realistic goals, a relationship must exist between the annual goals and the student's present level of performance. An example of an annual goal derived from present-level statements is presented below:

Present level: The student can properly hold a pencil and make vertical, horizontal, diagonal, and circular marks on a paper.

Annual goal: The student will be able to write on a paper format from memory the capital and small letters of the alphabet.

In order to develop appropriate annual goals and short-term objectives the team will: a) determine the subcomponents of the skill to be taught, b) identify and name the behavior that the student will demonstrate once the objective is accomplished, c) define the conditions under which the behavior will occur, and d) state the acceptable level of performance. These criteria not only specify what the student will learn but also serve as a vehicle for monitoring pupil and program progress.

In writing annual goals and short-term objectives care must be taken to select appropriate behavioral terms to describe the required performance. Terms such as *understand* and *appreciate* are too general and vague to be useful; whereas *list, name, remove, identify, compare,* etc. exemplify appropriate behavioral terms specifying an observable and measureable activity.

Examples of inappropriate and appropriate annual goals and short-term objectives are presented below:

Inappropriate annual goal: The student will have a good understanding of the alphabet.

Appropriate annual goal. The student will be able to pronounce the names of the letters of the alphabet, A through Z.

Inappropriate short-term objective: The student will comprehend the letters A through F.

Appropriate short-term objective: The student will be able to pronounce the names of the letters of the alphabet, A through F with 90 percent accuracy.

In writing annual goals, the team leader should move the team through each of the priority areas identified. Starting from the lower-order skills and moving upward, the team should estimate what the student will be able to do in a priority area by the end of the year. With this estimate as a guide, annual goals can be written for each skill cluster within a priority area. Suppose, for example, that arithmetic addition is identified as a priority area for a third-grade learning disabled student. After examining and comparing the student's assessment data and summary report to an arithmetic scope and sequence chart, it is determined that the student has mastered whole numbers to 100 and addition involving two addends under 10 with sums under 10(e.g., 3 + 5 = 8). The student also demonstrates spotty mastery of addition involving two addends under 10 with sums under 20 (e.g., 9 + 4 = 13). By utilizing the scope and sequence chart, the team determines that in order to obtain a higher level of skill development, the student would need to master: (a) addition involving two addends under 10, e.g., 9 + 4 = 13, (b) addition involving two-digit addends with no carrying, e.g., 14 + 22 = 36, (c) addition involving two-digit addends with renaming in the one's place, e.g., 14 + 29 = 43, and (d) addition involving three-place or more addends with renaming in one or more places, e.g., 295 + 78 = 373. Because of the student's present rate of progress, motivation, level of skill development, etc., the team decides that by the end of the year the student will be able to master (a), (b), and (c). For each one of these skill clusters an annual goal is written. An example of annual goal for each cluster is presented below:

(a) On a paper-pencil format the student will be able to add any two numbers from 0 to 9.

(b) On a paper-pencil format the student will be able to add any two-digit addends with no carrying.

(c) On a paper pencil format the student will be able to add any two-digit addends with renaming.

Short-Term Objectives. Once the annual goals are written, the next step is to identify several short term objectives for each annual goal. In developing these the team should examine each annual goal and determine the sequence of steps necessary to complete that goal. For each annual goal there should be at least four or five short-term objectives which may be viewed as milestones between the student's present level of functioning and the point the team hopes the student will reach by the end of the year (annual goals).

The following is an example of several short term objectives developed for an annual goal.

Annual goal: When presented auditorially with a consonant sound the student will be able to write its corresponding letter.

Short-term goal # 1: When presented auditorially with the consonant sounds b, d, f, h, j, or k the student will be able to write their corresponding letters.

Short-term goal #2: When presented auditorially with the consonant sounds l, m, n, o, p, or q the student will be able to write their corresponding letters.

Short-term goal #3: When presented auditorially with the consonant sounds r, s, t, v, w, x, y, or z the student will be able to write their corresponding letters.

Short-term goal #4: When presented auditorially with the consonant sounds c and g the student will be able to write one of the letters corresponding to that sound.

While the annual goals should always be developed by the team, short-term objectives can be obtained from a variety of sources: curriculum guides, textbooks, teacher's guides, material manuals, grade-level objectives, etc. If these sources are used, care must be taken to insure that the short-term objectives reflect a logical progression of intermediate steps from where the student presently is to where it is planned he will be at the end of the school year.

DELIVERY OF SERVICES

With a clear understanding of the student's present level of functioning and the point he or she is anticipated to have reached at the end of the year, the team is ready to decide what services are necessary to implement the I.E.P., i.e., the team's task becomes one of arranging the appropriate educational and related services needed to support the process of moving from the present level of functioning toward successful attainment of the annual goals. The specific educational services needed by the student must be outlined in a statement which is to include:

(a) A statement of the regular, special education, and related services needed successfully to attain the annual goals. This list is determined without regard to availability of the services.

(b) A list of the special education and related services to be provided.

(c) The date when specific services begin and the length of time these will be provided.

(d) A list of the persons responsible for implementing services.

(e) A list of any special instructional media and materials needed.

(f) A description of the extent to which the student will participate in regular education programs.

(g) A justification for the type of educational placement which the student will have.

In order to provide services that correspond to the specific educational needs of the student, a range of placement options should be available, thus, allowing for flexibility in matching services to the student's individual needs. Before any placement decision is made, the team must insure that to the maximum extent appropriate, the handicapped student is educated with children who are not handicapped. Special classes, separate schooling, or other removal of the student from the regular educational environment should occur only when the nature or severity of the handicap is such that education in regular classes with the aid of support services cannot be achieved satisfactorily. This concept is commonly known as the *least restrictive alternative*.

Regular, special education, and related services. Without regard to the availability of the services, the first step in the placement process is a listing of the specific educational services needed by the student. This includes a description of the regular, special education, and related services required to meet the student's unique needs.

A direct relationship should exist between the student's annual goals and their clusters of short-term objectives and the services listed. The team specifies the type of educational placement required to achieve those goals. With the student's present level of functioning, degree of severity, annual goals, and the least restrictive alternative as a focus, the team selects the educational option that most nearly corresponds to the student's needs. For example, for a third-grade learning disabled student with mild language difficulties, regular classroom instruction with support and resource room instruction would be appropriate, whereas for a sixth-grade learning disabled student with few academic skills, special class or resource room instruction would be appropriate.

Next, the team must decide which related or other special education services are required to meet the student's needs. Speech pathology, audiology, psychological services, physical and occupational therapy, recreation, school health services, social work, parent counseling, and diagnostic medical services comprise related services, while other special education services include special physical education and vocational education.

Once the team has determined the regular, special education, and related services needed, a statement of educational services is written. Based on the student's annual goals and short-term objectives such a statement might read:

> The majority of the student's instruction should be within the regular classroom. The student should spend a minimum of five one-hour sessions weekly in a resource room receiving remedial instruction in reading and language skills. Twice a week the student should receive direct instruction on articulation from the speech therapist. The regular classroom teacher will require indirect support services to assist him/her in meeting the student's unique needs within the regular classroom.

Up to this point, services have been determined without regard to the availability of these services, but now the team's next task is to list the actual special education and related services to be provided. Under ideal conditions, no discrepancy should exist between needed and delivered services. An example of a list of special education and related services to be delivered is:

- Support by the L.D. teacher to the regular classroom teacher
- Resource Room, Learning Disabilities
- Speech Therapy

Date and length of services. When the special education and related services to be delivered have been listed, the team determines when the services will begin, end, and the amount of time per week for delivery of the services. The team decides when the student needs services and how soon these will be available. The duration of services can only be an estimate of the degree of time necessary satisfactorily to accomplish the annual

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goals. In Figure 2 the previous example of special education and related services to be delivered has been expanded to include implementation date, hours per week, and completion date.

FIGURE 2

SERVICES AND THEIR DURATION

Services to Be Delivered	Implementation Date	Hours/ Week	Completion Date
1. Support by the LD teacher to the regular classroom teacher.	October 3, 1977	2	May 28, 1978
2. Resource Room, Learning Disabilities	October 3, 1977	5	May 28, 1978
3. Speech Therapy	October 5, 1977	2	February 1, 1978

Individuals responsible for implementation. For each service, a list of persons responsible for the delivery of that service is developed, thus, providing the team with a quick and efficient means for determining who is responsible for what.

Media and materials. Included in the statement of educational services should be a list of any special instructional media and materials needed, however, only those highly "specialized" materials and/or media necessary should be listed since, otherwise, the team would be required to list all the instructional media and materials that will be used with the student. It is the responsibility of the implementing teachers and/or specialists to determine the media and materials that are not commonly a part of the special service option. Examples of special instructional media and/or materials are : Language Master, orthopedic aids, System 80, Gillingham materials, B.S.C.S. Science Curriculum, Slingerland materials, etc.

Extent of the student's participation in regular education programs. The concept of *least restrictive environment* requires that removal from the regular educational or related services be documented. Documentation of services includes a description of the extent to which the student will participate in the regular education program and a justification for the type of educational placement chosen for the student.

Specifying the extent to which the student will participate in the regular program can be done in straightforward manner. The team has already determined the amount of time allocated for special education and related services; thus, unless otherwise specified, the remainder of the time is spent in the regular classroom. An example of a description of the extent to which the student will participate in the regular education program might read:

> The student is to spend approximately 50 percent (4 hours a day) of his/her instructional time in a regular 5th-grade classroom. Within the regular educational environment, the student will attend classes in art, physical education, science, spelling, and language arts.

Justification for placement. The justification for the type of educational placement corresponds to the specific educational needs of the student. If a discrepancy exists between services needed and delivered an explanation should be provided. In justifying the educational services provided, the team reviews the decisions and considerations that led to the delineation of specific services. These decisions and considerations are then listed in summary form. For example, a justification for an educational placement might read:

> It was deemed necessary to provide the student with services in a part-time special class with regular classroom

instruction because: 1) the student's chronological age is 12 years and 5 months; 2) the student's overall level of functioning is at the second-grade level; 3) the student evidenced an academic retardation of five years in math and reading; 4) the student needs individualization, success, and small group instruction; and 5) the student can successfully participate in art, physical education, and history classes.

EVALUATION

Ideally, instructional planning results in effective and appropriate learning; however, unless the student's progress towards annual goals and short-term objectives is evaluated, instructional benefits will be minimal. Similarly, without a strong evaluation component the I.E.P. can become a paper exercise of little practical value.

Systematic collection of data on the student's progress serves a double function by allowing the team to: (a) determine if annual goals and short-term objectives are being achieved, and (b) establish a basis for making adjustments in the instructional plan. Evaluation criteria for monitoring provisions of services, annual goals, short-term objectives, and consumer satisfaction must be specified.

Although standardized tests are often used, these are generally not appropriate for measuring student performance on specific short-term objectives since they seldom relate directly to the student's instructional plan. What is needed to determine if progress is adequate is a means of collecting information on specific objectives over time.

The student's daily work products plus the teacher's observation over time are two means by which student progress on specific objectives can be measured. By noting the time required by a student to complete instructional tasks, the teacher can estimate rate. Accuracy on daily work products indicates the degree of success the student is exhibiting on activities designed to facilitate the acquisition of the objective. When combined, rate and accuracy on daily work products allow for a good measure by which to adjust the student's daily instructional plan.

Observation of the number of trials per lesson is another means of evaluating a student's progress toward a specific objective. Graphs can be kept indicating the number of trials presented each lesson. This information will often reveal whether the task is appropriately sequenced and/or presented. A large number of trials per lesson would indicate that instructional revision is necessary.

Criterion reference testing is a commonly used method to examine a student's performance on a very specific behavior. The intermediate steps necessary to complete a certain objective are determined and each step is specified in performance terms whereupon a level of proficiency is established. For example, a criterion reference test item might read:

> When presented with a flashcard with the letters "sl", the student will be able orally to produce the "sl" blend with 85 percent proficiency.

The objective and its intermediate steps can both be written as criterion reference test items. At established intervals, progress toward the proficiency level can be tested and thus provide the teacher with a means by which to measure student progress.

A final means for assessing progress towards a specific objective is the use of a data-based system consisting of five essential elements: (a) specification of the objectives in performance terms, (b) collection of baseline data, (c) initiation of instruction, (d) collection of progress data, and (e) appropriate modifications of the instructional plan. This system provides a means by which the teacher can continually assess the appropriateness of objectives and instruction.

For each objective, the team decides the evaluation criteria to be used to determine progress toward the short-term objective. Rate, daily work products, trials per lesson, criterion reference tests, and/or a data-based system may be employed. In specifying the evaluation criteria, it is important that the evaluation activities relate directly to the student's instructional plan. In this respect attention must be given to the relationship between the evaluation task and the instructional activity, the time required for the teacher to conduct evaluation, the time required by the student to demonstrate task performance, and the value of the information derived from evaluation.

Besides evaluating progress toward short-term objectives, it is necessary to determine if long-range goals are being achieved. By viewing a long-range goal as the culmination of a series of short-term objectives, progress can be determined by examining the data collected on the intermediate short-term objectives. In conjunction with standardized pre- and posttest batteries this informal information will indicate the student's rate and amount of educational change.

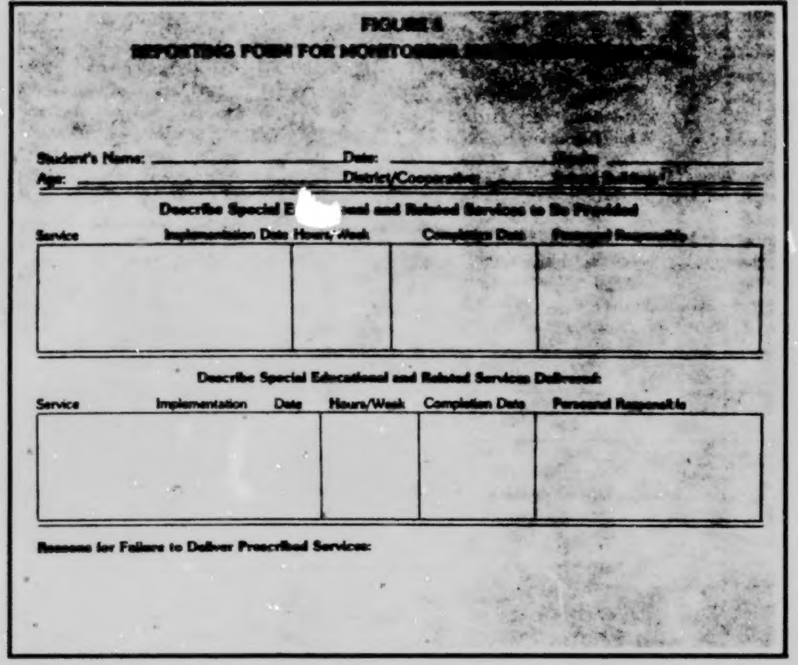


FIGURE 3

REPORTING FORM FOR MONITORING [illegible]

Student's Name: ____________ **Date:** ____________ **Grade:** ____________
Age: ____________ **District/Cooperative:** ____________ **School Building:** ____________

Describe Special E[illegible]onal and Related Services to Be Provided

Service	Implementation Date	Hours/Week	Completion Date	Personnel Responsible

Describe Special Educational and Related Services Delivered:

Service	Implementation Date	Hours/Week	Completion Date	Personnel Responsible

Reasons for Failure to Deliver Prescribed Services:

In addition to evaluating goals and objectives, provisions must be established for monitoring provisions of services, parental participation (understanding and satisfaction) and student receptivity. A team member, the Instructional Coordinator, should be assigned the responsibility of monitoring service provisions and consumer feedback, including evaluation data from participating teachers and/or specialists, reports from specific educational services, and consumer satisfaction.

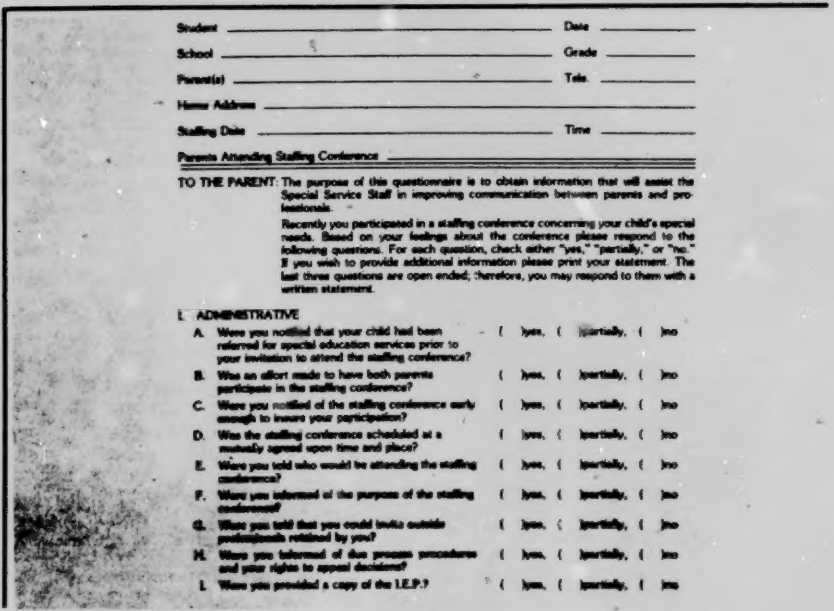
Monitoring of services. Information on two types of services should be collected: a) short-term, such as temporary direct instruction provided by a specialist, and b) long-term, e.g., assignment to a resource room on an ongoing basis. For short-term services, teachers and/or specialists should submit a brief report every six to nine weeks to the Instructional Coordinator. This report (See Figure 3) should indicate what, where, and when services were to be provided and how, where, and when the agreed upon services were delivered. If the agreed upon services were not delivered, reasons why should be specified. For services of an ongoing nature, the Instructional Coordinator should consult with the participating personnel at the end of each six- or nine-week period. Based on this feedback, the Instructional Coordinator can determine if services are being adequately delivered and if they are not, make the necessary revisions.

Parental involvement. While the I.E.P. is not a binding contract, it represents an agreement for services between the school district and the student's parents. The involvement of parents as "equal partners" in making decisions related to special services for their handicapped child is implicit in PL 94-142. This involvement is viewed as a positive movement in recognizing the rights of parents and should encourage professionals to be more sensitive to parental concerns and attitudes.

To insure that the concerns and needs of parents are recognized and considered in developing instructional plans for their child, a system should be implemented allowing parents the opportunity to respond to questions related to the quality of interaction. To assist in obtaining this information from parents, the *Staffing Conference Feedback* (Parent Form) was designed. Following each staffing, parents are provided an opportunity to respond to questions related to the quality of communication/interaction. School districts may modify or alter particular questions to reflect more nearly their needs. It is critical, however, that questions clearly reflect the philosophical intent of parent involvement (See Figure 4).

FIGURE 4

STAFFING CONFERENCE FEEDBACK
(PARENT FORM)



Student ______________________ Date __________

School ______________________ Grade __________

Parent(s) ______________________ Tele. __________

Home Address ______________________

Staffing Date ______________________ Time __________

Parents Attending Staffing Conference ______________________

TO THE PARENT: The purpose of this questionnaire is to obtain information that will assist the Special Service Staff in improving communication between parents and professionals.

Recently you participated in a staffing conference concerning your child's special needs. Based on your feelings about the conference please respond to the following questions. For each question, check either "yes," "partially," or "no." If you wish to provide additional information please print your statement. The last three questions are open ended; therefore, you may respond to them with a written statement.

I. ADMINISTRATIVE

A. Were you notified that your child had been referred for special education services prior to your invitation to attend the staffing conference? ( )yes, ( )partially, ( )no

B. Was an effort made to have both parents participate in the staffing conference? ( )yes, ( )partially, ( )no

C. Were you notified of the staffing conference early enough to insure your participation? ( )yes, ( )partially, ( )no

D. Was the staffing conference scheduled at a mutually agreed upon time and place? ( )yes, ( )partially, ( )no

E. Were you told who would be attending the staffing conference? ( )yes, ( )partially, ( )no

F. Were you informed of the purpose of the staffing conference? ( )yes, ( )partially, ( )no

G. Were you told that you could invite outside professionals retained by you? ( )yes, ( )partially, ( )no

H. Were you informed of due process procedures and your rights to appeal decisions? ( )yes, ( )partially, ( )no

I. Were you provided a copy of the I.E.P.? ( )yes, ( )partially, ( )no

II. [illegible]

A. Were team members knowledgeable of your child's emotional/social behavior? ( )yes, ( )partially, ( )no
B. Were team members knowledgeable of your child's academic status? ( )yes, ( )partially, ( )no
C. Was a variety of service options discussed relative to your child's needs? ( )yes, ( )partially, ( )no
D. Was the assessment information collected from a variety of sources? ( )yes, ( )partially, ( )no
E. Was the assessment evaluation conducted by a multidisciplinary team? ( )yes, ( )partially, ( )no
F. Do you feel that the test instruments used were culturally or racially discriminatory? ( )yes, ( )partially, ( )no
G. Did the team justify any removal of your child from the regular classroom? ( )yes, ( )partially, ( )no

III. PARENTAL

A. Did you feel comfortable attending the staffing conference? ( )yes, ( )partially, ( )no
B. Were you asked about your opinions? ( )yes, ( )partially, ( )no
C. Did you feel free to contribute suggestions regarding your child's needs? ( )yes, ( )partially, ( )no
D. Did the professional staff appear interested in what you had to say? ( )yes, ( )partially, ( )no
E. Do you feel that the professional staff felt your participation was important? ( )yes, ( )partially, ( )no
F. Were you provided ample time to express information that you felt to be relevant? ( )yes, ( )partially, ( )no
G. Did you understand the I.E.P. developed for your child? ( )yes, ( )partially, ( )no
H. Did you feel that your child should have participated in the staffing conference? ( )yes, ( )partially, ( )no

IV. GENERAL

A. Do you feel that the recommendations made were in the best interest of your child? ( )yes, ( )partially, ( )no
B. Are you satisfied with the decision made at the staffing conference? ( )yes, ( )partially, ( )no
C. Do you feel that support services other than those recommended are needed for your child's program? ( )yes, ( )partially, ( )no
D. Did you feel free to ask questions regarding the contributions, evaluation, and suggestions of the: ( )yes, ( )partially, ( )no
  1. classroom teacher ( )yes, ( )partially, ( )no
  2. learning specialist/special teacher ( )yes, ( )partially, ( )no
  3. special education representative/administrator ( )yes, ( )partially, ( )no
  4. assessment team member ( )yes, ( )partially, ( )no
  5. school psychologist ( )yes, ( )partially, ( )no
  6. ______________________ ( )yes, ( )partially, ( )no

E. At the conclusion of the staffing conference, how did you perceive your child's problems in view of your previous understanding? ______________________
____
____
____
____

F. Remarks ______________________
____
____
____
____

Student receptivity. The Instructional Coordinator needs to collect information on the student's receptivity to the educational program. If the student is disinclined towards the program, success is unlikely. The Instructional Coordinator should consult with the student's teachers and, where appropriate, the student himself to determine if the student is: (a) responsive and motivated by his/her educational plan and (b) if the student feels that the plan is appropriate to his or her needs.

IMPLEMENTATION

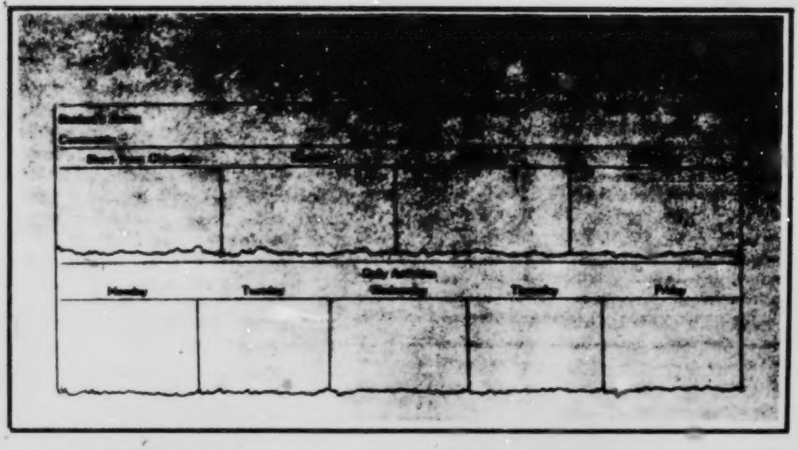
With the completion of the written I.E.P., the services required to achieve the instructional program are activated and annual goals, short-term objectives, services, and evaluation criteria are operationalized. As mentioned earlier, the Instructional Coordinator is assigned the responsibility of coordinating classroom and/or special services in order to implement the instructional plan. This role is basically intended to: (a) foster cooperation and communication among teachers and specialists, (b) provide a liaison between the team and the teachers implementing the plan, and (c) assure that implementation of the plan actually occurs.

The Instructional Coordinator's first task is to meet with each teacher and/or specialist who will provide direct and indirect services to the student and familiarize them with the assessment summary document, annual goals, short-term objectives, services, and evaluation criteria specified in the written I.E.P. This information provides them with an understanding of the direction and purpose of the instructional plan. Furthermore, the Instructional Coordinator is responsible for initiating cooperation and communication among teachers and specialists who must be able to share information and work together in order to maximize instructional effectiveness. Each of these professionals are made aware of the roles and responsibilities of the others and a means of communication is agreed upon.

In addition to fostering cooperation and communication, the Instructional Coordinator acts as a liaison between the team and the individuals who implement the plan. Also, the Coordinator is responsible for reporting the student's progress to the team and insuring that the plan is adequately implemented. As the educational plan is operationalized and executed, flaws in the written I.E.P. will become apparent: the annual goals and short-term objectives may not be realistic; the length of time necessary to master objectives may be excessive; and all the objectives may be accomplished in half of the expected time. These and other problems will have to be resolved. For minor difficulties the implementers and the Instructional Coordinator should be able to work out an appropriate solution while it will be necessary to reconvene in order to resolve major problems. If, for example, a teacher is having difficulty accomplishing a specific short-term objective, the Instructional Coordinator, the teacher, and other concerned parties should determine a solution. However, if a student masters all of the prescribed objectives before the end of the year, the team will be reconvened to develop additional objectives.

As mentioned earlier, the Instructional Coordinator is also responsible for collecting evaluation data from each of the participating teachers and specialists. In order to determine if the plan is being implemented appropriately, evaluation data should be collected from the teachers at least every six or nine weeks. Progress on the prescribed goals is then reported to the team, parents, other teachers working with the student, administrators, and the students themselves. If progress is not adequate, the instructional plan is modified.

While the Instructional Coordinator initiates and monitors the written I.E.P., the essence of the I.E.P., classroom intervention, is administered by regular classroom teachers and/or specialists. Similarly, it is the responsibility of the participating teachers to select the methods and materials necessary successfully to attain the goals and objectives specified in the written instructional plan. For example, if the learning disabilities specialist is assigned the responsibility of teaching the student consonant symbol-sound associations, the specialist will have to refine this goal or objective and determine appropriate materials, reinforcers, and daily activities.


Daily Activities
Monday
Tuesday
Wednesday
Thursday
Friday

A valuable aid for refining the I.E.P.'s short term objectives is a prescription sheet (See Figure 5). On this sheet the teachers write the assigned short-term objectives and specify the methods, materials, outcomes, and daily activities necessary to achieve the objectives. Initially, teachers refine only the objectives they are to work with immediately. As progress is achieved and short term objectives are accomplished, additional objectives are refined. The prescription sheet provides the teacher with a written guide and the team with a summary of the teacher's activities.

While the scope of this article does not allow us to present an indepth discussion of appropriate teaching principles, it is necessary, however, to present a list of remediation principles that should be considered by the teacher when refining short term objectives and delivering services.

The proposed methods, materials, reinforcers, and daily activities should be realistic in respect to the instructional time available.

Suggested activities must be based on the recognition that the teacher's energy and time for preparation are not unlimited.

Remediation is a process of continuous evaluation. Evaluation data are used to determine if progress is adequate or if alterations in the instructional plan are required.

Successful remediation is based upon a flexible use of a wide variety of materials, techniques, and methods.

Remediation techniques and materials must be carefully selected and tailored to the student's unique needs.

Selected activities should be enjoyable and motivating to the student.

The teacher should dramatize student success through the use of charts, verbal praise, etc.

Activities must be provided which accomodate generalization of skills to other contexts.

CONCLUSION

Providing a handicapped student with an appropriate education is a complex task in view of the complicated nature of a handicapping condition and the variety of pressures brought to bear upon the student. Consequently, the education and remediation of the exceptional student require the resources and energy of a variety of education and/or noneducational personnel to resolve considerations concerning assessment, goals, objectives, services, evaluation, methods, materials, reinforcement, and organization. In this connection, the I.E.P. provides a framework through which personnel resources and educational considerations can be directed and, if properly used, assures a linkage between the student's needs and the education delivered.

PL 94-142 sets forth detailed requirements on what should be included in an I.E.P. and the conditions under which the plan should be developed. However, it does not specify the planning process to be followed. Due to the complexity of the requirements, it is clear that a systematic approach to the development and implementation of the I.E.P. is necessary. The approach presented in this article is intended to provide the team and participating teachers with a systematic guide from which to construct an appropriate educational program for handicapped children. Sample I.E.P. forms are presented on the following pages.

REFERENCES

Federal Register. Tuesday, August 23, 1977. Part II. Education Handicapped Children. Washington: Department of Health, Education, and Welfare, Office of Education.

I. SAMPLE
INDIVIDUAL EDUCATION PROGRAM
(Assessment Form)

School Year ______________ **District/Cooperative** __________

Present Placement ____________ **School Building** ____________

Student's Name ________ **Date of Birth** ______ **Age** __________ **Grade** ________

Primary Area of Exceptionality ____________ **Dates of Meetings** ________________

Summary of Present Level of Performance:

Assessment Team Members:	**Signatures**	**Date**

Date ____________

Annual Goals and Short-Term Objectives

Annual Goal A ____________
Objective 1-A ____________
Objective 2-A ____________
Objective 3-A ____________
Objective 4-A ____________
Objective 5-A ____________

Annual Goal B ____________
Objective 1-B ____________
Objective 2-B ____________
Objective 3-B ____________
Objective 4-B ____________
Objective 5-B ____________

Services	Implementation Date	Hours/Week	Completion Date	Personnel Responsible	Special Media/Materials

Description of Time in Regular Program:

Rationale for Placement Recommendations

I.E.P. Committee Members Present:
Name Date Position Signature
1. ____________
2. ____________
3. ____________

Date of Parental Acceptance ____________
Date of Parental Rejection ____________
Signature ____________
Signature ____________

IV. SAMPLE

INDIVIDUAL EDUCATION PLAN
(Evaluation Form)

Date ____________ Student's Name ____________

EVALUATION:

Objective Number	Evaluation Criteria	Date Begin	Date End	Progress Adequate	Progress Not Adequate	Objective Met	Objective Not Met

Comments:

Revisions:

Parent Contacts:
Date Time Results
____
____

Lecture Transparencies Set No. 2

"Examples of IEP Forms"

Present these examples and discuss their content. Produce copies for each student. After the discussion distribute the copies plus Handout No. 1. Handout No. 1 is a list of criteria. Have students evaluate the samples by applying the criteria on Handout No. 1. (You may opt to have students evaluate only one sample.)

NOTE: The samples are active forms used by school districts.

2.a Sample 1: A one page IEP form
2.b Sample 2: A four page form which can be added to, e.g., page 2
2.c Sample 3: A two page form used by a large school district
2.d Sample 4: A two page form which has page 2 typed on the back of page 1. This form is different due to the coding system.

INDIVIDUAL EDUCATIONAL PROGRAM

Student Services

Name ________________________________ Matric No. ____________

School ______________________ Grade ______ Birthdate ____________

Signatures: Ethnic Code ____________

Adaptive Education Teacher ______________________ Date ____________

Classroom Teacher ______________________

Parent/Guardian ______________________

A. Statement of Educational Problem, Including Current Educational Performance and Assessment Data:

B. Annual Goal:

C. Instructional Plan

Short-term Objectives	Methods/Materials

D. Proposed Review Measures

Recommendations:
Adapt. Ed. Program ______________________
Proportion of time mainstreamed ______________________
Starting Date ____________
Review Date ____________
Distribution: SS Area Off., Cum Folder, SS Folder

Additional Services:
Speech Therapy ____________
Physical Therapy ____________
Occupational Therapy ____________
Parent Group Participation ____________

Projected Termination Date ____________

Sample #1

Rev 5/77
7/77

INDIVIDUAL EDUCATION PROGRAM

Student Name or ID #__________ Date of Birth__________ Grade ______

Parent/Guardian__________ Address__________ Phone__________

School District__________ Attendance Center__________

Primary Language of Home__________ Is English spoken or understood______ Ethnic______

I.E.P. Date__________ Primary Area of Exceptionality__________ (Code 1-12)

Placement/Planning/Review Team:	Signature	Instructional Team:	Signature
Principal		Principal	
Parent		Parent	
Student (when appropriate)		Teacher	
Teacher		Special Teacher	
Special Teacher		Other (specify)	
Psychologist		Other (specify)	
Social Worker			
Speech and Language			
Other (specify)			

Summary of Present Level of Educational Performance:

Strengths	Weaknesses

I.E.P. ______________________________
Name

Educational Services Recommended: (Ideal)

Self-contained ☐
Resource Room ☐
Itinerant ☐ **Specify** ______________, ______________, ______________
Home ☐
Institution **Specify** ______________, ______________, ______________

Educational Services Provided:

Services	**Date Initiated**	**Amount of Time Assigned**	**Anticipated Duration**

% Regular ______________
% Special ______________

Justification for placement Recommendation:

NAME ______________________

Annual Goal - Priority # ( ) ______________________

SHORT TERM OBJECTIVES (WRITTEN IN MEASURABLE TERMS)	NAME & POSITION OF PERSON RESPONSIBLE	HOURS PER WEEK	IMPLEMENTATION DATE	COMPLETION DATE	SPECIAL METHODS AND/OR MATERIALS	COMMENTS

STUDENT'S NAME ____________________

Program Review (required to be reviewed four (4) times yearly)

Review I

Reviewing date: ______________________________

Reviewed by: ________________________________

Comments: ____

____

____

Review II

Reviewing date: ______________________________

Reviewed by: ________________________________

Comments: ____

____

____

Review III

Reviewing date: ______________________________

Reviewed by: ________________________________

Comments: ____

____

____

Review IV

Reviewing date: ______________________________

Reviewed by: ________________________________

Comments: ____

____

____

TOPEKA PUBLIC SCHOOL - USD #501 INDIVIDUAL EDUCATIONAL PROGRAM DEPARTMENT OF SPECIAL SERVICES

BACKGROUND INFORMATION:

Student's Name: ______________________ Attendance Center: ____________
Last First Middle

Conference Date ________

New IEP ____ IEP Update _____

Grade Level: __________ Student's ID#: ______________ DOB: __________ Age: _______ Home School: ____________

Primary Special Placement: ____________ Time in Regular Education ____________

Program Area & Delivery Model: ______________________

Summary of Present Level of Educational Performance:

STRENGTHS

WEAKNESSES

Describe Special Educational and Supportive Services Needed: (Without Regard to Local Availability)

Support Services

__psychology
__speech pathology
__social work
__occupational therapy
__counseling
__music therapy
__physical therapy
__adaptive P.E.

Special Classes

__LD
__PSA
__Gifted
__OH
__EMH
__Homebound
__Vision
__Hearing
__TMH
__SMH

Other

__Parental Counseling/Training
__Medical
__Community Services
__Therapy
__Mainstreaming
__Transportation

ANNUAL GOALS: (Prioritized)

1.

2.

3.

4.

Describe Actual Special Educational and Related Services to be Provided:

Services	Date Initiated	Anticipated Duration	Services	Date Initiated	Anticipated Duration

I.E.P. Committee Members Present:

SIGNATURE PARENT

SIGNATURE PRIMARY IMPLEMENTOR

SIGNATURE POSITION

SIGNATURE POSITION

SIGNATURE POSITION

SIGNATURE POSITION

____Parent Opted Not To Participate _____Contact Made Date______
Date______ Date______

White - Dept. Special Ser. Pink - teacher/school
Canary - Parent/ Goldenrod - Secondary
Guardian Implementor/Chairperson

Stock No. 8622-00 Rev. 3-78

Sample #3

IEP (B)

CHILD'S NAME OR ID # ______________________

ANNUAL GOAL ______________________

HOURS PER WEEK IN PROGRAM ______________________

NAME AND POSITION OF PERSON RESPONSIBLE

____

____

Short Term Objectives (Written in Measurable Terms)	Special Methods and/or Materials	Implementation Date (Percentage Achieved)	Completion Date (Percentage Achieved)

White - Parent
Canary - Teacher/School
Pink - Dept. Special Serv.
Goldenrod - Dept. Special Serv.

Stock No. 8622-10

INDIVIDUALIZED EDUCATIONAL PLAN

Student

/ / Birthdate

Program

Other Services

/ / SAT/EAS Mtg. Date

Teacher

School/District

GOALS (in order of Priority)

I understand and approve the program and services recommended for my son/daughter, and agree with the emphasis on the goals stated in this plan;

I understand that short-term objectives (learning steps) will be written in an attempt to achieve each goal during the school year, that I may give input toward writing those objectives, and that the teacher will conference with me regarding my son's/daughter's progress;

I understand that this program is reviewed annually, and that I may request at any time a re-evaluation or change of educational program for my son/daughter. I give my consent to the on-going assessment which is an aspect of this program.

Parent Signature

/ / Date

You are entitled to written explanation of your rights and appeal procedures which are available upon your request through your school district office. (Education Code: Title V, Sections 3159 - 3167)

Date: / / Baseline Performance:	GOAL:	Code: #
	OBJECTIVE:	A1 C A2 D A3 E1 A4 E2 A5 F B G
Methods & Materials:		
General Evaluation & Comments:		/ / Date ☐ met ☐ not met

Teacher/Specialist

P.S.

/ / Date

GOAL CODES

A1. READING

- 0110 Readiness
  - 0111 Visual
  - 0112 Auditory
- 0120 Decoding
  - 0121 Sound/Symbol Relationship
  - 0122 Sight Vocabulary
  - 0123 Phonetic Analysis
  - 0124 Structural Analysis
- 0130 Oral Reading Skills
- 0140 Comprehension
  - 0141 Context Clues
  - 0142 Vocabulary Development
  - 0143 Sequencing Ideas
  - 0144 Finding Main Ideas
  - 0145 Drawing Conclusions
  - 0146 Differentiating Facts/Opinions
- 0150 Study Skills
  - 0151 Dictionary Use
  - 0152 Using Reference Materials
  - 0153 Library Use
  - 0154 Organizing Information
  - 0155 Summarizing Information
- 0160 Purpose & Value of Reading
- 0170 Practical (Survival) Reading

A2. ORAL COMMUNICATION

- 0210 Auditory Perception
  - 0211 Listening Skills
  - 0212 Discrimination
  - 0213 Memory/sequencing
  - 0214 Comprehension
- 0220 Speech
  - 0221 Pre-Articulation Skills
  - 0222 Articulation
  - 0223 Voice
  - 0224 Fluency
- 0230 Expressive Language
  - 0231 Concept Development (Vocab.)
  - 0232 Grammar/Syntax
  - 0233 Propositionality

A3. MANUAL INSTRUCTION

- 0310 Non-Oral Language
  - 0311 Speech Reading
  - 0312 Finger Spelling
  - 0313 Sign Language
  - 0314 Typing/Braille Writing
  - 0315 Adaptive Communication (Communication Boards)
  - 0316 Body Language

A4. WRITTEN COMMUNICATION

- 0410 Written Language
  - 0411 Handwriting
  - 0412 Spelling
  - 0413 Grammar/Punctuation
  - 0414 Composition (Sentence, Paragraph, Essay)

A5. COMPUTATIONAL SKILLS / MATH

- 0510 Math Readiness
  - 0511 Number Recognition
  - 0512 Counting
  - 0513 Number Concepts
- 0520 Basic Math
  - 0521 Addition
  - 0522 Subtraction
  - 0523 Multiplication
  - 0524 Division
  - 0525 Place Value/Regrouping
  - 0526 Fractions
  - 0527 Percentages
  - 0528 Simple Algebra
  - 0529 Simple Geometry
- 0530 Practical (Survival) Math
  - 0531 Telling Time
  - 0532 Measurement
  - 0533 Reasoning/Word Problems

B. BODY COORDINATION

- 0610 Gross Motor
- 0620 Fine Motor
- 0630 Orientation
  - 0631 Body Awareness
  - 0632 Spatiality
  - 0633 Directionality
  - 0634 Laterality
  - 0635 Manual Skills (Blind)
  - 0636 Visual Efficiency (Partially Sighted)

C. HEALTH & HYGIENE

- 0710 Health
  - 0711 Physical Fitness
  - 0712 Nutrition
  - 0713 Drug Education
- 0720 Hygiene
  - 0721 Knowledge and Care of Body Systems

D. SELF CONCEPT

- 0810 Self Concept
  - 0811 Identification of Body Parts
  - 0812 Self-confidence
  - 0813 Needs & Interests
  - 0814 Personal Values
  - 0815 Expression/Understanding
  - 0816 Risk-taking/Decision Making
  - 0817 Intra-personal Adjustment
  - 0818 Adaptability

E1. SCHOOL ADJUSTMENT

- 0910 Relationships with Others
  - 0911 Rel. with Peers
  - 0912 Rel. with Adults
  - 0913 Rel. With Authorities
- 0920 Classroom Behavior
  - 0921 Attendance/Promptness
  - 0922 Attention Span
  - 0923 Task Completion
  - 0924 Follows Directions
  - 0925 Works Independently
  - 0926 Self-discipline

E2. COMMUNITY ADJUSTMENT

- 1010 Social Skills
  - 1011 General Public Speaking
  - 1012 Manners
  - 1013 Behaving Responsibly
- 1020 Family Life
  - 1021 Child Care
  - 1022 Human Sexuality
  - 1023 Family Relations

F. VOCATIONAL & CAREER DEVELOPMENT

- 2010 Vocational & Career Development
  - 2011 Exploration of Job Types
  - 2012 Exploration of Interests and Aptitudes
  - 2013 Specific Skills Training
  - 2014 Applying for a Job
  - 2015 Interviewing Techniques

G. DAILY LIVING SKILLS

- 3010 Self-help Skills
  - 3011 Feeding/Eating/Drinking
  - 3012 Toileting
  - 3013 Grooming
  - 3014 Dressing/Undressing
- 3020 Independent Living Skills
  - 3021 Use of Public Transport.
  - 3022 Use of Telephone
  - 3023 Consumer Skills
  - 3024 Housekeeping Skills
  - 3025 Driving Skills
- 3030 Safety
- 3040 Recreation/Leisure Skills

____
STUDENT

____
PROGRAM

____
OTHER SERVICES

___/___/___
DATE

Handout No. 1

Applying the following criteria in evaluating the IEP forms.

Does the form allow for:

1. Listing of services to be provided
2. Recording students' current level of performance
3. Stating annual goals
4. Stating short term objectives
5. Indicating when evaluation will occur
6. Identifying who participated in the IEP Conference
7. Parental signatures
8. Identify who will provide the service
9. Designating the amount of time the child will spend in regular classes.

Also make judgments about space provided, organization of form, ease of completion, and general useability.

Handout No. 2

Sample Case Study

The sample case study is from Skrtic, T.M. *Instructional Resources Manual for Exceptional Children and Youth: An Introduction*, By Meyen, E.L., Page 201-206.

Depending on the background of your students it may be necessary to discuss each item in the case study. You may want to edit the case study in advance. It contains more information than is required to complete the IEP form.

Sample Case Study

The Sample Case Study is presented in two parts: Section I contains social, medical, and educational information in narrative form. Aptitude, achievement, criterion-referenced, and informal assessment data are summarized in Section II.

Section I can be used in the following ways:

1. As a student guide for Suggested Project 8 (Case Study)
2. As the case study for Suggested Project 6 (The Placement Committee: Simulation)
3. To generate class discussion

Sections I and II combined can be used to complete simulated IEP exercises. The decision to use Section II should be made by the instructor, based on class makeup. Beginning students may not have the background necessary to appropriately apply the assessment data.

SECTION I

Narrative

Report Date: January, 1978

Name: Cathy Grade: 4 Birthdate: 9/1/68 Sex: F

Class Placement: Regular 4th grade, with Reading, Math, Spelling/Language in Noncategorical Resource Room

Family Background

Cathy's father is a skilled laborer in an area steel mill, and her mother is a housewife. Cathy is the youngest of two children. Her older brother is an average student in the eighth grade. Both parents completed high school.

Family interactions appear to be "normal," although Cathy's parents are very concerned about her lack of progress in school and her emotional problems. They believe Cathy is "retarded" and feel they are at fault. They're eager to help, but are somewhat overprotective of Cathy, treating her as though she were much younger.

Birth/Medical History

Cathy's mother had a normal pregnancy and delivered on schedule. However, there were complications at birth. Labor was prolonged, and forceps were used during delivery. Cathy was hospitalized when six years of age for a broken collarbone and has had the typical array of childhood illnesses. Cathy was absent for 49 days during first grade because of a recurring condition of nausea and vomiting. A medical explanation for this condition could not be substantiated, although the physical symptoms persisted.

Developmental History

Motor milestones were delayed an average of from three to six months. Her mother reported that Cathy didn't talk until 18 months.

Educational History

Cathy is in her second year of enrollment at Millhouse Elementary School. During third grade, she spent the majority of the school day in the self-contained class for the Educable Mentally Retarded; however, she was integrated into regular physical education and art classes. Currently, she is enrolled in a regular fourth grade room and spends 50 percent of the school day in the noncategorical resource room.

Before coming to Millhouse School, Cathy spent two years at Pilot Elementary School, where she was labeled "educable mentally retarded." She spent her second year in Pilot's self-contained special classroom.

Social History

No sibling rivalry is reported between Cathy and her brother, although the parents seem to favor the older child. Cathy prefers to play with children two and three years younger than herself. Her mother reports that Cathy's playmates seem to "outgrow" her.

Socialization in school has been difficult for Cathy. She started school late (because of hospitalization) and never has caught up to her age peers, socially. She experienced a great deal of trauma during her first school year. She cried at home before school and frequently during the day. Sociometrically, she was very low during first grade.

During her second school year, the situation did not improve for Cathy, and she was assigned to the EMR self-contained classroom. Although Cathy did improve in basic skills in this class, socially her problem worsened. In the regular classroom she was rejected; in the EMR room she was "taken advantage of" by several students who were more "streetwise" than Cathy. Her special teacher reported that Cathy's "gullibility" caused most of her behavioral problems.

Cathy made considerable social gains during her first year at Millhouse School (third grade). Although she was still enrolled in a self-contained EMR classroom, her improved social skills allowed her to be integrated into two nonacademic regular classes (i.e., art and physical education). Her parents also noticed the difference and attributed the change to Cathy's teacher who, as they put it, "had a way with Cathy."

Based on the improvement in Cathy's social skills, she was assigned to a regular fourth grade classroom (with supplementary services) the next academic year (1977-78). She now spends one-half of the school day in the regular classroom and the remaining time in a noncategorical resource room.

Reason for Referral

Cathy's regular fourth grade teacher reports that, although Cathy has made good progress socially, her academic abilities are at a standstill. "She definitely cannot do fourth grade work." Her reading level is around 2.2, and her math skills are even lower (readiness level).

She credits Cathy's social gains to the friendship she has developed with two of her classmates. They seem to accept Cathy, and the three of them work and play well together.

The teacher believes that the resource services Cathy receives are ineffective and recommends more time in the resource room or a full-time special class placement. The first thing the teacher requests, however, is an updated educational assessment and a reevaluation of her educational plan.

SECTION II

Educational Assessment

The information below represents data gathered at the request of Cathy's fourth grade teacher. Cathy was ten years old and in the second semester of fourth grade when the data were collected.

Aptitude:

Weschler Intelligence Scale for Children (1/6/78)

Verbal IQ	68
Performance IQ	74
Full Scale IQ	71

Information	4	Picture Completion	8
Comprehension	7	Picture Arrangement	6
Arithmetic	3	Block Design	6
Similarities	8	Object Assembly	9
Vocabulary	4	Coding	5
Digit Span	5		

Achievement:

Wide Range Achievement Test (1/11/78)

Reading : 3.0
Spelling : 2.8
Math : 1.1

Peabody Individual Achievement Test (1/22/78)

Math : 1.3
Reading (Rec.) : 2.3
Reading (Comp.) : 3.1
Spelling : 1.6
General Info. : 3.0

Criterion-Referenced Measure:

System FORE (1/18/78-1/30/78)

Area : Language (1/18/78)

Strand	*Level* (18 max.)
1. Phonology	7
2. Morphology	5
3. Syntax	8
4. Semantics	10

Area : Reading (1/21/78)

Strand	*Level* (18 max.)
5. Visual Skills	6
6. Decoding/ Vocab.	7
7. Comprehension	9
8. Study Skills	6

Area : Mathematics (1/30/78)

Strand	*Level* (18 max.)
9. Geom/Measure	5
10. Number/Numeral	6
11. Operations/ Applications	4

Informal Assessment:

Silvaroli Informal Reading Inventory (2/6/78)

Word Recognition

Level	*Untimed*
Pre-primer	100%
Primer	97%
First	95%
Second	85%
Third	70%

Reading Levels

Independent	Primer/First
Instructional	Second
Frustration	Third
Hearing Capacity	Fifth +

Silvaroli Informal Spelling Inventory (2/12/78)

Level	*Score*
Primer words (recognized at sight)	97%
Primer words (missed at sight)	50%

Behavior Assessment:

Devereux Elementary School Behavior Rating Scale (2/20/78)

Behavior Factor	*Raw Score*	*SD*
1. Classroom Disturbance	5	-1
2. Impatience	5	-1
3. Disrespect-Defiance	4	-1
4. External Blame	7	0
5. Achievement Anxiety	23	+2 to +3
6. External Reliance	20	+2
7. Comprehension	10	-1
8. Inattentive-Withdrawn	9	0
9. Irrelevant-Responsiveness	5	-1
10. Creative Initiative	10	-1 to 0
11. Need Closeness to Teacher	19	+1
12. Additional Items	-	-
Unable to Change	6	+2 to +3
Quits	4	+1
Slow Work	5	+1 to +2

Handout No. 3

Sample IEP Form

The sample IEP form is not one used by a school district. It is merely an organizational structure prepared for in-service purposes. This example is by Reuben Altman at The University of Missouri-Columbia. You may want to design your own. The important factor is to be certain that all required elements are included.

Dr. Rueben Altman
Department of Special Education
University of Missouri
Columbia, Missouri 65201

PROPOSED INDIVIDUALIZED EDUCATION PROGRAM FORM

Student Name ______________________ Date of Meeting __________

School/District ______________________________________

Home Address ______________________________________

Home Phone ______________________ Date of Birth __________

Parent/Guardian(s) ______________________________________

Present Level of Educational Performance: ______________________

____

____

____

____

Annual Goal(s): ______________________________________

____

____

____

Short-term Objectives:

(1) ______________________________________

(2) ______________________________________

(3) ______________________________________

(4) ______________________________________

(5) ______________________________________

(6) ______________________________________

(7) ______________________________________

(8) ______________________________________

Objective Number	Instructional Procedure or Service	Material(s) Required	Individual Responsible

Objective Number	Start Date	End Date	Evaluation Criteria	Evaluation Date	Results of Evaluation

Type of Educational Placement: ______________________________

____

Extent of Participation in Regular Educational Program: ______________________________

____

TEAM MEMBERS:

Name ______________________________ Role ______________________

Name ______________________________ Role ______________________

Name ______________________________ Role ______________________

Name ______________________________ Role ______________________

Name ______________________________ Role ______________________

I.E.P. Recipients:

Name ______________________________ Role ______________________

Name ______________________________ Role ______________________

Name ______________________________ Role ______________________

Name ______________________________ Role ______________________

Name ______________________________ Role ______________________

Projected Date for I.E.P. Review Conference ______________________

Parent ____________________________ Date ______________________

Lecture Transparencies Set No. 3

"Requirements of an IEP System"

The intent of this lecture is to assist students in designing their own IEP systems. Some districts have developed their own form system. Thus, teachers will be involved in revising and developing forms. The transparency 3.a identifies criteria beyond the specific PL 94-142 requirements which should be included in an IEP form system.

3.a Suggested IEP system requirements.

SUGGESTED I.E.P. SYSTEM REQUIREMENTS

Content free

Accomodate all behaviors

Cumulative

Allows for decisions

Efficiency in use

Ease of entry by student-teacher

Allows for full participation

Standard format

Sustainable

ANALYZING INSTRUCTIONAL TASKS

by
P. Jeannie Kleinhammer
University of Kansas

Making decisions on the order in which instruction is presented and just what instruction a child needs for the achievement of a specific skill, often requires a systematic sequencing of the task. This sequencing or task analysis process is of particular importance in being able to identify those precise needs of the handicapped learner that may be different from other students. This module provides both an awareness of task analysis and the application of the process to instructional situations.

Student Outcomes

Upon completion of this module the student will be able to perform the task analysis process to aid in planning, delivery and evaluation of instruction.

Instructor Information

Prerequisites:

The student will benefit from experience and/or instruction in the ability to recognize and describe the behavioral characteristics, developmental sequences, and skill responses. The student should also be proficient in writing behavioral objectives.

Organization:

The module consists of six student objectives. For each of the student objectives the number of activities range from one to four tasks, including required readings, class discussion, and class activity task sheets to be completed by the student.

Content Overview:

The module provides an overview of task analyses, how to complete an analysis, and how it may be used in the instructional process. The readings include descriptions of specific types of task analyses, guidelines for completing task analyses, and application of analyses to specific instructional programming.

Suggestions for Teaching:

Two one-hour class sessions are recommended for the delivery of this module. It is suggested that the activities related to student objectives 1-4 be covered in one session and those for student objectives 5 and 6 be covered in the second session.

The following suggestions are critical to teaching this unit.

1. The students should be instructed to read the Lerner, Bateman, and Siegel selections prior to the first session.
2. Students should review the above readings and complete the Junkala reading prior to session two.
3. The handouts may be completed in class, or, if time does not permit, they could be given as take-home assignments.
4. Recommended readings which are not included with the module should be placed on reserve in an educational library.
5. Prior to teaching the module the instructor should write a task analysis using Handout 1 or a preferred format and should duplicate the task analysis for student use.

Evaluation:

The evaluation procedures include participation in class discussion and completion of task sheets for each of the objectives.

ANALYZING INSTRUCTIONAL TASKS

by
P.Jeannie Kleinhammer
University of Kansas

Prospectus

Making decisions on the order in which instruction is presented and just what instruction a child needs for the achievement of a specific skill, often requires a systematic sequencing of the task. This sequencing or task analysis process is of particular importance in being able to identify those precise needs of the handicapped learner that may be different from other students. This module provides both an awareness of task analysis and the application of the process to instructional situations.

Student Objectives	Enabling Activities
1. The student will define task analysis as a means of identifying skills/sequence demands and as a means of identifying modality/processing demands.	1. Read Lerner, pp. 108-112 (Reserve Reading).
	2. Read Frank, pp. 16-29.
	3. Read Bateman, pp. 33-43.
	4. Class activity: Students should briefly define the skills/sequence approach to task analysis and the modality/processing approach to task analysis.
2. The student will describe the relationship between task analysis and scope and sequence charts.	1. Class activity: Students should review a scope and sequence chart and a task analysis developed by the instructor for the relevant content area (see handout 1).
	2. Class discussion: Task analysis may be considered as a refinement of the learning sequence presented in a scope and sequence chart. While a scope and sequence chart presents an overview of an entire curriculum, task analysis breaks one terminal behavioral objective into sub-objectives. Task analysis is also more specific with regard to behaviors which the student will exhibit. Task analysis is particularly important for students who are not successfully progressing through the sequence of skills presented in the scope and sequence of a regular curriculum. For these students, specificity and intensity of instruction is critical; thus, analysis of tasks provides the teacher with a means of identifying (1) demands placed on the student by a particular learning event, (2) points at which the student is not successful and needs more intense or different types of instruction.

Student Objectives (cont.)	Enabling Activities (cont.)
3. The student will identify essential and non-essential sub-skills in two task analyses.	1. Read Siegel, pp. 15-21. 2. Class activity: Using Handout 2, essential subskills in task analysis, students should check all esential sub-skills in the sequence. 3. Class discussion: If discrepancies occur between students in identifying essential subskills, the instructor should ask students to discuss their differences of opinion and provide a Rationale for why they did or did not include a given step. (While the instructor's key suggests essential subskills, class consensus should be reached on inclusion or exclusion of a particular subskill.)
4. The student will write one task analyses.	1. Class activity: Students should complete the activity described in Handout 3, introduction to task analysis.
5. The student will list uses of the modality/processing approach to task analysis and uses of the skills/sequence approach to task analysis.	1. Review Bateman, Siegel, and Lerner readings. 2. Read Junkala, pp. 401-409. 3. Class discussion: Discuss differences between the approaches of Bateman and Siegel and that of Junkala. (The Lerner reading may be helpful in identifying differences.) As Lerner points out, tasks can be analyzed by the skills sequence approach, the modality/processing approach, or a combination of these. The choice depends on what information you can best use as a teacher. One way to integrate the two approaches is to use the skills/sequence approach to list all steps in the task itself. Then, in order to identify entry behaviors of alternative tasks, if the learner cannot perform a subtask, apply the combination approach to determine what learner characteristics might influence the failure and what steps might be taken to alter the task demands in light of these characteristics. 4. Class activity: Students should list 5 uses of task analysis including both approaches described above.

Student Objectives (cont.)

6. The student will list modifications in two subtasks of a task analysis which might be made if the learner does not successfully complete those subtasks.

Enabling Activities (cont.)

1. Class activity: Using Junkala's model, the modality/processing dimensions of task analysis and Handout 4, a revised format for task analysis, the students should identify the modality/processing demands made by each subtask included in the task analyses completed in Student Objective 4. For 2 subtasks, the student should list alternative activities which alter the modality/processing demands.

Readings

1. Lerner, Janet W. *Children with Learning Disabilities.* Boston: Houghton Mifflin Company, 1976, pp. 108-112.
2. Frank, Alan R. "Breaking down learning tasks: A sequence approach." *Teaching Exceptional Children,* 6, (Fall 1973) pp. 16-29.
3. Bateman, Barbara D. *The Essentials of Teaching.* Dimensions Publishing: 1971, pp. 33-43.
4. Siegel, E. and Siegel, R. "Instructional sequences." *Journal of Learning Disabilities,* 8, 4, (1975) pp. 15-21.
5. Junkala, John. "Task Analysis: The processing dimension." *Academic Therapy,* 8, 4, (Summer, 1973) pp. 401-409.

Handout 1

(To be completed and duplicated by the instructor prior to teaching this unit.

Instructional Objective

Subskills

Begin Instruction

Entering Behaviors
5
4
3
2
1

Breaking Down Learning Tasks: A Sequence Approach

Alan R. Frank

■ Being a better educator does not always entail coming up with a new routine, a clever lesson plan, or some gimmicky idea. One of the simplest ways to sharpen classroom performance is to take learning tasks and break them down into small, sequential steps. Here is one approach for developing task analyses for the students in your classroom.

PERFORMING A TASK ANALYSIS

The first step in performing a task analysis is to clearly state what the learning task is. Stated another way, what objective is to be met by the child? Some examples of objectives might be:

1. The student is able to tell time to the quarter-hour.
2. The student is able to order an item from a department store catalog.
3. The student is able to correctly address an envelope.
4. The student is able to measure and cut wood to size in building a birdhouse.

The second step in the task analysis is to list all the steps, operations, or prerequisite skills that are necessary in order to meet the objective. At first it may be easiest to brainstorm or write down the steps or operations without regard to the sequence in which they should be taught. After this list is completed, then attention should be given to placing the steps or operations into some logical teaching sequence.

Alan R. Frank is Associate Professor in the Division of Special Education, the College of Education, The University of Iowa, Iowa City.

USING INFORMATION FROM THE TASK ANALYSIS

Once a sequential list of steps or operations has been developed the teacher must make a decision as to what steps or operations a given child can or cannot perform. That is, the teacher needs to do some informal testing. By doing this the teacher can avoid spending time teaching a skill a child already has. The sequential list of steps can be used to develop such an informal test. Sample items from each step on the list can be compiled into the informal test (Smith, 1969; Frank *et al.*, 1971).

After determining what steps or operations the child can perform, the teacher can begin to teach in sequential order those steps which are higher on the task analysis hierarchy.

AN EXAMPLE OF A TASK ANALYSIS

Suppose a teacher wants a child to reach the following objective: the child is able to correctly count a handful of coins handed to him by the teacher. The handful of coins contains pennies and nickels only.

In this situation, the child will receive the coins in his hand in a scattered fashion. That is, the coins will not be placed in the child's hand in a straight line. This point is important in that money is passed from person to person in a scattered fashion. However, it has been my experience that children with learning problems need to line coins up in descending order of value when first learning how to count money. This approach seems to facilitate the counting process. Therefore, this knowledge of children's learning behavior should be taken into account in the task analysis.

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Figure 1 contains a list of the steps involved in arriving at the stated objective.

An informal test can be constructed from these steps. A sample informal test is displayed in Figure 2. Each test item can be placed on a separate card for ease of presentation to the child. Also, actual

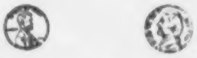
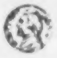
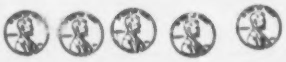
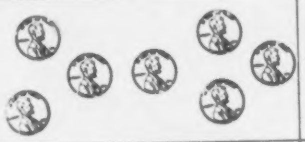
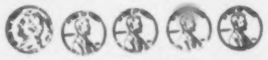
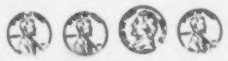
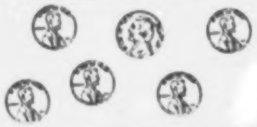
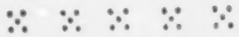
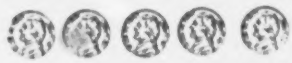
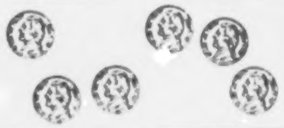
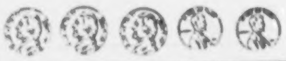
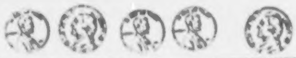
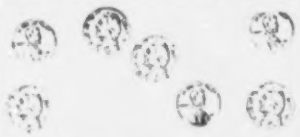
Figure 1

Task Analysis of Objective: the child is able to correctly count a handful of coins handed to him by the teacher

1. Child can verbally identify a penny and nickel.
2. Child states that a nickel is equivalent to five pennies.
3. Child can correctly count a row of pennies placed in a straight line.
4. Child can correctly count pennies placed in scattered fashion.
5. Child can count one nickel and several pennies which are placed in a straight line where the nickel is first.
6. Child can count one nickel and several pennies which are placed in a straight line where the nickel is *not* first.
7. Child can count one nickel and several pennies placed in a scattered fashion.
8. Child can count by fives.
9. Child can count a row of nickels placed in a straight line.
10. Child can count several nickels placed in a scattered fashion.
11. Child can count a row of several nickels and pennies in which all the nickels appear first.
12. Child can count a row of several nickels and pennies in which all the nickels are *not* first.
13. Child can count several nickels and pennies which are placed in scattered fashion (the stated objective for the child).

Figure 2

Informal Test on Objectives: the child is able to correctly count a handful of coins handed to him by the teacher

Test Item Number	*Test Item*	*Directions given by teacher*
1		Teacher asks child to name each coin as she points to it.
2		Teacher asks child how many pennies he can get for one nickle.
3		Teacher asks child to count the money.
4		Teacher asks child to count the money.
5		Teacher asks child to count the money.
6		Teacher asks child to count the money.
7		Teacher asks child to count the money.
8		Teacher asks child to count by fives out loud.
9		Teacher asks child to count the money.
10		Teacher asks child to count the money.
11		Teacher asks child to count the money.
12		Teacher asks child to count the money.
13		Teacher asks child to count the money.

coins should be glued over the pictured coins. This will add a dimension of reality and interest to the informal test.

After administering the informal test to each child who will be learning about money, the teacher is able to determine more precisely what steps each needs to learn in order to reach the stated objective. Suppose, in a hypothetical case, that a child successfully passes Items 1-7 on the informal test. This would suggest that the child recognizes pennies and nickels, is able to count a nickel and several pennies in combination. However, it appears that the child needs help in learning to count by fives. Further, the child needs to transfer the skill of counting by fives to counting nickels. Finally, the child needs to learn to count several nickels and pennies in combination. The steps involved in this process are Numbers 8-13 in the task analysis in Figure 1.

A PROBLEM FOR THE TEACHER TO PONDER

The teacher should perform a task analysis on the following objective. After the task analysis, develop an informal test based on the task analysis as was done in the previous example.

Objective: the child is able to alphabetize the following list of words, each of which has been placed on a separate card: *stop, ask, dinner, name, boy.*

Now stop and perform the task analysis and develop the informal test. When this problem is finished, check the solution against the one suggested below. Figure 3 contains a task analysis of the objective and Figure 4 suggests a possible informal test.

Performing a task analysis on each educational objective can result in more effective teaching. A task analysis can provide for careful sequencing of a learning task as well as an informal test which can pinpoint specifically what skills a child needs help in learning.

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Smith, R.M. Collecting diagnostic data in the classroom. *TEACHING Exceptional Children*, 1969, *1*, 128-133.

Figure 3

Task Analysis of Objective: the child is able to alphabetize the following list of words, each of which has been placed on a separate card: stop, ask, dinner, name, boy

1. Child can write the alphabet in the correct order.
2. Given a stack of 26 flash cards, each containing a different letter of the alphabet, the child can place the cards in alphabetical order.
3. Given a stack of 26 flash cards, each containing a word beginning with a different letter of the alphabet, the child can place the cards in alphabetical order *with* the help of an alphabet chart.
4. Given a stack of 26 flash cards, each containing a word beginning with a different letter of the alphabet, the child can place the cards in alphabetical order *without* the help of an alphabet chart.
5. Given a stack of 15 flash cards, each containing a different letter of the alphabet, the child can place the cards in alphabetical order *with* the help of an alphabet chart (therefore, some letters of the alphabet are missing).
6. Given a stack of 15 flash cards, each containing a different letter of the alphabet, the child can place the cards in alphabetical order *without* the help of an alphabet chart.
7. Given a stack of 15 flash cards, each containing a word beginning with a different letter of the alphabet, the child can place cards in alphabetical order *with* the help of an alphabet chart.
8. Given a stack of 15 flash cards, each containing a word beginning with a different letter of the alphabet, the child can place the cards in alphabetical order *without* the help of an alphabet chart.
9. The child is able to alphabetize the following list of words, each of which has been placed on a separate card: *stop, ask, dinner, name, boy.*

Figure 4

Informal Test on Objective: the child is able to alphabetize the following list of words, each of which has been placed on a separate card: stop, ask, dinner, name, boy

Test Item Number	*Test Item*	*Directions given by teacher*
1	Pencil and blank piece of paper.	Teacher asks child to write the alphabet from a to z.
2	26 flash cards of alphabet letters.	Teacher asks the child to place alphabet cards in order from a to z.
3	26 flash cards, each containing a word beginning with different letters of the alphabet and an alphabet chart.	Teacher asks the child to place flash cards in alphabetical order. Child can use alphabet chart if he needs it.
4	26 flash cards, each containing a word beginning with different letters of the alphabet, but no alphabet chart.	Teacher asks child to place flash cards in alphabetical order.
5	15 flash cards, each containing a different letter of the alphabet and an alphabet chart.	Teacher asks child to place flash cards in alphabetical order. Child can use alphabet chart if he needs it.
6	15 flash cards, each containing a different letter of the alphabet, but no alphabet chart.	Teacher asks child to place flash cards in alphabetical order.
7	15 flash cards, each containing a word beginning with a different letter of the alphabet and an alphabet chart.	Teacher asks child to place flash cards in alphabetical order. Child can use alphabet chart if he needs it.
8	15 flash cards, each containing a word beginning with a different letter of the alphabet, but no alphabet chart.	Teacher asks child to place flash cards in alphabetical order.
9	List of words, each of which has been placed on a separate card: *stop, ask, dinner, name, boy.*	Teacher asks child to place flash cards in alphabetical order.

CHAPTER III

TASK ANALYSIS AND ENTERING BEHAVIOR

An educational objective has been established and we are ready to move to the next step. The objective has been stated in the form of a task the children will learn to perform. They will write, draw, read, say, or construct something which represents a new accomplishment.

What are the sub-tasks, the steps or the prerequisites to performing the new task which could not previously be performed? *Task analysis is the process of isolating, describing and sequencing (as necessary) all the necessary sub-tasks which, when the child has mastered them, will enable him to perform the objective.*

The focus in analyzing the task is *only* on those skills which are part of what we are trying to teach. The words minimal and essential could be used in place of *necessary*. Let us say, an objective was for a first grader to:

> "Read phonically regular trigrams such as VAB, RET, MOK, aloud at a rate of 40 correct per minute with no more than 2 errors per minute."

Bateman, Barbara. *The Essentials of Teaching*. Reproduced by permission.

This might be an objective of a teacher who emphasized code breaking skills in beginning reading instruction. Let us assume the children come to first grade with no prior directly-related learning (not usually a true assumption, but still a useful one to make). The teacher might approach this task analysis by asking, "What are the teachable subskills which would insure that every child who had them could reach this objective?" Or she might ask, "What are the possible sources of error or confusion that could result in failure to achieve the objective?" A variety of ways can be used to approach the job of analyzing a task. Basically the approach is first logical and then empirical — which simply means that the teacher must figure it out the best way possible — drawing on reason, experts, curriculum guides, past experience with teaching related skills, knowledge of how children respond and perform in classrooms, and so on — and then must try it out with the children. It is just that simple, and just that difficult!

If we look back at our decoding objective, one possible set of subskills that would guarantee the performance outlined in the objective would be as follows. Each child must be taught to:

1. Consistently begin decoding at the beginning (the concept of "left" is *not* essential — the child must only begin on the left side — he needn't be able to call it "left") and move progressively toward the end without changing direction. In short, he must be taught to "Start here and go that way (⟶)."

2. Respond with the appropriate sound for each letter (sound-symbol relationship).

3. Blend sounds, in groups of three, at the rate of 40 groups per minute.

Of course, there are other ways to slice the pie or to divide up the skills. The above way seems reasonably efficient. The crucial questions are whether all three subskills are *necessary* and whether they are *sufficient* to insure success in reaching the specified objective. Some teachers might be silently protesting at this point that they would never have set such an objective in the first place. Fair enough. Some wouldn't. The point is, however, that whatever the task, once it is determined, it should be analyzed or broken down, into *its own* necessary and sufficient subskills.

Many common classroom activities are closely related to valid objectives and it is easy to mistake these related activities for essential ones. To illustrate, in a recent workshop, a group of primary teachers were given the following objective and asked to design an activity to teach it:

> "Given the visual letter m, the child will respond with the sound /m/."

Several teachers suggested giving the child a worksheet depicting many objects and having him circle all those objects whose names begin with /m/. This activity might be quite appropriate for some *other* objective (try writing an objective for which it would be well-suited just for practice), but it is only "related" to our objective above; it is not on-target. A child could do an infinite number of such worksheets without error and still be unable to fulfill the objective. Thus, we know that our activity is neither necessary nor sufficient and is not, therefore, a subskill to be listed under the objective.

When a teacher undertakes a task analysis, what does the finished product look like? For tasks such as many facets of arithmetic which involve sequential learning, we might describe it as a task ladder, with the top rung being the culminating step — our objective. (As we will see shortly, many objectives can be reached with little attention to the *order* in which the child masters steps, so that the analogy of a ladder, with the child moving from one step to another sequentially, doesn't always fit.)

Imagine for a moment that every teacher had in her possession a list of skills and concepts she was to teach at her grade level and the list extended downward to include major prerequisite learnings, area by area. This can be readily visualized as a group of *task ladders*, probably arranged by content area. The primary teacher would have, at a minimum, a task ladder for reading skills, one for arithmetic skills, one for handwriting, one for classroom behaviors (including work habits, socially acceptable group behavior, etc.), and perhaps one for social studies, science, or health.

There might be several different ladders within a given area. In arithmetic, one for computational skills, one for geometric concepts, and a third for story problem skills. The highest rung of a given task ladder is the specific instructional objective for that given unit of instruction (the unit could be a year, a week, a lesson, or x number of pages in the workbook). Each prerequisite or related concept or skill occupies its appropriate rung.

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The very first consideration must be our instructional objective. What is it the children need to learn and what performance on their part constitutes evidence that they have learned what we are trying to teach? The following example is a task analysis undertaken by two students* and is based on the programming of DISTAR Arithmetic Level I**.

Task: That the child adds two one-digit numbers whose sum is no greater than ten.

Criterion for Performance: That the child does the task correctly, or if an error occurs, can initiate and complete correction without assistance.

Terminal behavior: That the child can add four out of five problems correctly, none of which he has seen before, or had practice with.

Entering behaviors: That the child

1. talks
2. responds to verbal instructions
3. holds a pencil, crayon, or chalk
4. makes a straight vertical line
5. makes a plus sign

Intermediate objective 1: The child counts orally from one to ten, which includes counting from a number other than one and counting to a number other than just ten.

Specific objective A:

1. Counts to 3
2. Counts to 5
3. Counts to 8
4. Counts to 10
5. Counts to 2

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*Bob Davis and Abigail Koch, University of Oregon, Dept. of Special Education, graduate students for a course conducted by Steve Lilly, University of Oregon.

**Engelmann, Siegfried. Chicago: Science Research Associates, 1970.

Specific objective B:

1. Counts from 3 to 10
2. Counts from 2 to 5
3. Counts from 4 to 7
4. Counts from 6 to 9
5. Counts from 3 to 8

Intermediate objective 2: The child counts given straight lines which are vertical, where each line corresponds to one number and, conversely, the child can make the appropriate number of lines when told the number of lines to make.

Specific objective A:

1. Counts 2 lines
2. Counts 4 lines
3. Counts 3 lines
4. Counts 5 lines
5. Counts 7 lines
6. Counts 6 lines
7. Counts 9 lines
8. Counts 8 lines
9. Counts 10 lines
10. Counts 1 line
11. Counts 0 lines

Specific objective B: Given a number, the child makes the corresponding number of straight vertical lines.

1. 5 makes 5 lines
2. 7 makes 7 lines
3. 6 makes 6 lines
4. 4 makes 4 lines
5. 3 makes 3 lines
6. 9 makes 9 lines
7. 1 makes 1 line
8. 8 makes 8 lines
9. 10 makes 10 lines
10. 0 makes 0 lines
11. 2 makes 2 lines

Intermediate objective 3: That the child uses the plus sign (+) to count consecutively two separate groupings of lines and that he responds to the plus sign by stating the total number of lines when the two groups are combined.

Specific objective A:

1. **Reads a plus sign (+) correctly, i. e., that he says "plus" when he sees "+".**

2. **Reads a number sentence with lines, plus sign, and lines, e. g., ///+/// (hereafter stated as 3 + 3 etc. in this analysis).**

   3 + 3
   4 + 2
   2 + 2
   4 + 1
   7 + 1
   8 + 2

3. Reads a number sentence with lines, plus sign, and lines, and then gives the correct answer. For example ////+// = is read as "four plus two equals" and the correct answer is given.

   4 + 2 = 6
   2 + 2 = 4
   4 + 1 = 5
   7 + 1 = 8
   8 + 2 = 10

4. Adds all numbers except those used in the terminal objective.

   to 9, + 1
   to 8, + 2
   to 7, + 3
   to 6, + 4
   to 5, + 5
   to 4, + 6
   to 3, + 7
   to 2, + 8
   to 1, + 9

Specific objective B: Uses vertical lines and a plus sign to write problems on the board (or paper) and to obtain the correct answer, using the same examples as are in A, above.

Terminal objective: That the child adds four out of the following correctly when he writes them on the board using lines and a plus sign. None of the problems has he seen before.

1. "3 + 7"
2. "6 + 4"
3. "4 + 3"
4. "2 + 6"
5. "5 + 4"

Put into a task ladder, the above analysis would look like this:

Add correctly 4 of 5 problems containing two one-digit numbers whose sum is 10 or less	Instructional Objective
Uses vertical lines and plus sign to write problems from numerals, counts consecutively all lines and gives correct answer	Subskills
↑	
Counts *consecutively* two groups of lines joined by plus	
↑	
Reads a number sentence written with lines e. g., ////+//	
↑	
Says "plus" when he sees +	
↑	
Makes number of vertical lines indicated by numerals to 10	
↑	
Counts vertical lines	
↑	
Counts orally from 1 to 10	Begin Instruction
↑	
5. Makes a plus sign 4. Makes a straight vertical line 3. Holds pencil, crayon, or chalk 2. Responds to verbal direction 1. Talks	Entering Behavior Prerequisites

One reading program based on an analysis of the tasks of reading is DISTAR (Science Research Associates). One of the decoding objectives is to teach children to decode phonically regular, unfamiliar words. The main subskills taught enroute to the objective of teaching children to decode are:

1. Begin at the beginning and proceed sequentially in responding to a row of visual symbols. (Symbol-action games)

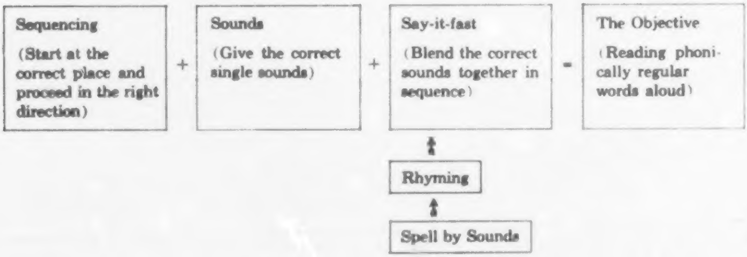
2. Given a word (such as "boy") aloud by the teacher, and then given a beginning sound (such as /s/) rhyme with the given word (in this example by saying /soy/). (Rhyming)

3. Given the visual letters, say the appropriate sound(s).

4. Given a series of sounds said slowly and/or separately, such as /mmm-aaa-nnn/, respond with the appropriate word (man) said at normal speed. (Say-it-fast).

5. Given a word (such as "am") aloud by the teacher, respond by saying the word slowly (aaa-mmm) with each sound distinct but without pausing between sounds (Spell by sounds).

Neither rhyming nor spelling-by-sounds is an essential part of the objective, but they *are* essential for later objectives in the program and they provide supplemental help to the skill of say-it-fast (blending), which is a trouble spot for many youngsters. The order of the mastery of these subskills doesn't make a great deal of difference, except that sequencing must precede or accompany blending. This task analysis might be diagrammed as follows:


Sequencing
(Start at the correct place and proceed in the right direction)
+
Sounds
(Give the correct single sounds)
+
Say-it-fast
(Blend the correct sounds together in sequence)
=
The Objective
(Reading phonically regular words aloud)
Rhyming
Spell by Sounds

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A thorough task analysis enables the teacher to determine quite precisely where to begin instruction geared toward the objective set. Remedial reading teachers often observe that even fifth and sixth grade children referred for help in reading have less than perfect mastery of sound symbol relationship and even more frequently are unable to blend sounds together. In all teaching, but especially so in remedial work, it is important to begin instruction on the appropriate level of task difficulty. This requires assessing the child's "entering behaviors". Task analysis provides an excellent and efficient means for doing this.

Assessment of Entering Behavior

Global descriptions of the child's entering behaviors include such common items as, "He is ready for third grade," or "He has a mental age of 8 - 6," etc. While this provides some information for the teacher, it really isn't much more than what she can quickly size up for herself within the first few encounters with the child. A score of "45% tile on the Wunmore Test of Somethingorother" similarly doesn't tell the teacher much she couldn't find out herself in more useful terminology. Even such "diagnostic" test data as "one year above grade level in reading, at grade level in spelling, and two years below grade level in arithmetic" doesn't really answer the twin questions of every teacher — "Exactly what and how does he need to learn?" All of the kinds of test data just mentioned derive from normative-referenced tests, those tests which have norms of one kind or another by which a child is compared to some group of children. These tests, at their best, may have a role to play in research or in placement decisions, but they are not very useful in teaching. It is time we faced that fact squarely and stopped subtly inferring that something is wrong with the teacher who cannot translate stanine scores into lesson plans. They just do not translate. Someday, with the aid of computerized programs or other technology, they may so translate, but that day is not yet here. Clearly, therefore, we are not advocating that teachers look to these tests or to school psychologists who use them for relevant data on the entering behaviors of the children to be taught.

If we do not look to normative-referenced tests, where then do we look? Some texts, especially in child development and elementary education, would have us observe the child in a variety of situations, interview his family, take a social history, discuss him with the school nurse, read his medical records, read daily anecdotal records kept by his last four teachers, check his cumulative folder and discuss it with the school counselor, and so on and on. If it were possible to do this for 27 children prior to lesson #1, which it is not, and if the data we would obtain were relevant, which they are not, then we might recommend this approach. But we do not. If we look to neither global normative-referenced tests nor to the shot-gun, find-out-everything-from-everybody-about-every-child schools of thought, what then?

If we had complete task ladders for each instructional objective, the relevant entering behaviors for any given task would be all the rungs preceding the objective or the final task. To know what a child must learn before he can do subtraction problems of the kind we are teaching we would construct simple check lists with a test item for each rung on the subtraction ladder. The concept that the equal sign means we must count to the same number on both sides is relevant to the task of solving problems of the form $9 - 3 = x$. Where a child's grandmother works and his IQ are not relevant. The rungs of the task ladder tell us what a child must be able to do in order to reach our objective, and that is what is relevant for the teacher. To put all of these last pages in one simple-to-understand but difficult-to-implement rule: To assess relevant entering behavior, the teacher must determine which prerequisites to successful performance of the task the child lacks. This presupposes of course that the teacher knows what the real prerequisites of all major tasks are. And that's where the rub comes. It seems to this writer that at the secondary level some teachers most often err on the side of underestimating the importance of prerequisite skills. When a history teacher limits his presentation to telling the students to read Chapter II in class and be prepared for an oral test on the material, the ability of each student to *read the assigned material* is absolutely critical. And yet, it happens so shamefully often that not all students confronted with such assignments can read them. Some primary teachers, on the other hand, tend to insert a great many totally irrelevant tasks on such basic ladders as reading. The act of reading (decoding) never requires that the student be able to put an x on the geometric form that is different, that he have a wide background of field trips, or that he be able to name the letters of the alphabet. And yet such activities are frequently labeled reading readiness or prerequisites to reading.

In summary, a meaningful assessment of entering behavior requires that the teacher:

(1) specify instructional objectives for the tasks to be taught,

(2) list the essential subskills and/or prerequisites to each task,

(3) construct a brief checklist of test items representing the subskills of each on the ladder,

(4) administer this checklist to the students.

This procedure, rather than relying exclusively on normative tests, interviews, or other so-called diagnostic data will provide the teacher with a meaningful assessment of content-related entering behaviors.

Grouping

Task analysis can also be helpful in grouping the children for instruction. Grouping should initially be done on the basis of the specific tasks the children need to be taught. In reading, those who have not mastered the necessary concepts of directionality (by this we mean *only* that we read and write this way →) and sequencing may be grouped for instruction in those concepts. Those who know directionality and sequencing but have not learned the basic sound-symbol relationships may be grouped together for that instruction. Ideally, children would be separately grouped for each educational task. In practice, those high on the rungs of one task ladder tend to be high on related task ladders, too. After the initial groupings are made, necessary regroupings should be done on the basis of the rate at which children learn. The groups of faster learning children can be somewhat larger than the slower moving group. One of the problems teachers face in implementing the desired flexibility in groupings is that children in the usual classroom are quite aware of which groups move faster and which move slower. In fact, when asked which reading group they are in, many youngsters immediately reply "top" or "bottom" rather than describing themselves as a "bluebird" or "chipmunk". One way to reduce and possibly even eliminate this difficulty (at least in first grade) is by having partitioned or screened areas for small group instruction to reduce the visibility of the group activities. If this could be successfully done, the child moved to a slower group would have only good feelings about now being in a situation where his *success* rate increased.

To describe children's learning by rate and the number of things yet to be learned is far preferable — factually, educationally, and humanistically — to older terms such as "bright", "smart", retarded", etc.

These steps illustrate one way of forming instructional groups based on task analysis:

Ten Guidelines for Writing Instructional Sequences

Ernest Siegel, Ed. D. and Rita Siegel, M.S.

Despite the fact that more courses are given and more literature is devoted to the overall topic of task analysis, teachers, though more than willing to implement, still seek more definitive guidelines for writing instructional sequences. This paper presents ten specific guidelines based on the pooled experiences and ideas of the authors and education majors in various colleges.

More and more, voices are crying out for greater precision in teaching. Both educators and practitioners readily agree that effective instruction begins when one matches the requirements of the task with the learning profile of the pupil. Despite the fact that there is no controversy regarding the desirability of instruction task analysis, in principle, current classroom practices simply do not reflect this awareness.

It is likely that teachers would be more willing to embrace and to *utilize* the concept of instructional sequencing if specific guidelines could be drawn up.

The following is a term paper that the senior author has assigned to students (in special education as well as in regular education, both graduate and undergraduate students) over the past ten years at various colleges:

TERM PROJECT ON LEARNING DISABILITIES

Children who present learning disabilities (i.e., problems in learning stemming from neurological impairment or emotional disturbance) often have difficulty in incidental learning and in "bridging gaps"; therefore, one of the principles for their education is to employ a sequential approach – i.e., a developmental hierachical set of activities and experiences leading to a specific, well-defined goal.

It is your task to list (and explain) the sequential steps necessary in teaching a child classified as "learning disabled" to master two of the following:

(a) multiply by 6
(b) perform subtraction with exchange
*(c) read and understand a map's grid system (longitude and latitude lines)
(d) differentiate auditorially (and in spelling and reading) the S and S-blends: Sm, Sp, Sl, etc. (e.g., the difference between "sell" and "smell" and "sit" and "slit")
*(e) ride a two-wheeled bicycle
(f) use a saw
*(g) solve a simple algebraic equation (e.g., $5 \times ? + 1 = 36$)
*(h) understand the alphabetizing system

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(use the dictionary - look up words quickly and systematically)

Choose any two (2). List all the sequential steps in order (explain when necessary). (Or, you may choose any of the above and one of your own). Note: Do not necessarily write a lesson plan (this need not be a single lesson, but a developmental sequence for one specific task; it may entail many lessons). Length: no more than 2 pages.

GUIDELINES

On the basis of various cross-currents which ensued while designing these sequences, evaluating them, criticizing and refining them, certain guidelines have emerged:

(1) *Avoid extraneous material.* For example, in a sequence design to help the pupil differentiate the S from an S-blend (e.g., Sm, Sp, Sl, St), a teacher proposed bringing in sugar, eggs, and an electric blender! The class agreed that while this might have some benefit in motivating a particular child, the connection between this and the task itself is an ethereal one at best. It is highly likely that the teacher got sidetracked with the word "blend." After all, the behavioral objective was not for the child to develop an appreciation for the phenomenon of blends generally, but to be able to distinguish auditorially Sm from S.

Likewise, some teachers, when asked to teach children to ride a two-wheeled bicycle, proposed having them begin by walking a straight line, walking on a balance board, or sitting on a wooden horse! Obviously, they are hung up on the word "balance." If this be the case, why not go all the way and ask the child to balance a basketball on his finger or a pointer on his nose? Clearly, the semantics of "balance" globally should not interfere with the teacher's concept as it specifically applies to bicycle riding.

(2) *Don't spend too much time in reteaching the prerequisite.* If the aim of the sequence is to teach the child to multiply by six, then one must assume that the child already knows that multiplication is a short-cut to addition, the meaning of the multiplication sign, the commutative quality of multiplication, and some of the prior "tables." If the child does not know all this and is in fact learning multiplication for the first time, then, why on earth would the teacher want to begin with the sixes?

Similarly, if the aim is to teach the child the alphabetizing system so that he will be able to look up words in the dictionary quickly and systematically, then one must assume that he already recognizes and can name all the letters.

Of course, there is a relationship between the sequence's aim - i.e., the behavioral objective, and the teacher's knowledge of the child - his level, learning style, intact and impaired modalities, etc. Even a good sequence is useless if the child isn't ready for it. Nevertheless, in designing sequences, the teacher must decide what the prerequisites are, assure herself that somewhere there surely must be a child who has mastered these, and then get on with the job of writing the particular instructional sequence, starting at the point of the child's entering behavior.

(3) *Use what the child knows - and this includes the prerequisites - to help him learn the new.* For example, it is a good bet that any given child has learned the "fives" in multiplying before the teacher attempts to teach the "sixes" - not because five comes first, but because the products always end in zero or five. Moreover, the fives are used in money, in telling time, scoring, etc. Therefore, a strategy for teaching multiplying by six might be to break up the six into five and one. Hence, 7x6 is approached as 7x5 and 7x1. The child should already know both of these answers. He may, of course, need help in adding 35+7 mentally - but that, then can be learned in a separate sequence.

(4) *Assume motivation.* In the never-ending debate between humanism and behaviorism, some teachers seem impelled to devote a considerable portion of the sequence (often more than 50% of it) toward motivation.

One teacher proposed teaching a child to ride a two-wheeled bicycle by talking about transportation and visiting a bicycle store. Another began his sequence for teaching a child to saw a piece of wood by discussing carpentry and furniture, and then asking the child to choose one of five pieces of wood and one of five saws.

Now, there is nothing wrong in attempting to motivate a child and, in fact, an insightful teacher would indeed recognize and make provisions for an unmotivated pupil. The reasons for the lack of motivation must be discovered, and a sequence for stimulating motivation, itself, can be developed. Behavior modification techniques are often helpful. The point, is however, that too much devotion to the child and his *presumed* lack of motivation often siphons the teacher's attention away from the instructional task. The net result is an ineffective sequence. At first glance, this written sequence may indeed *appear* valid, but if one subtracts all of the beginning motivation steps, the remainder generally is scant. It becomes apparent that in such a sequence there is no genuine attempt to *teach*. To put it differently, the teacher may succeed with motivating (even when it is not needed!) but fail with instruction.

Therefore, it is highly recommended that in writing instructional sequences, the teacher *assume* that motivation is present. Certainly there must be at least one child who is already motivated to learn but desperately needs systematic instruction. In the current vogue of "letting the child do his own thing," we must never forget that the handicapped learner has *already* demonstrated that he cannot learn on his own and, therefore, for him, instructional intervention based upon task analysis is of paramount importance.

(5) *Identifying sequential components*. In performing a task analysis, it is a good idea to look for specific areas which lend themselves to sequencing. There are general areas, of course, which obtain for all sequences: concrete to abstract, simple to more complex, proximal to distal, small initial doses to larger doses, a great deal of supervision to no supervision, etc. Besides these, a given behavioral objective will often have its own sequential components. They should be identified and incorporated into the written sequence.

For example, in teaching a child to saw a piece of wood, the direction should be from using soft wood to using hard wood, from pre-grooving the wood for the child to having him make his own groove, from holding the end of the wood for the child to giving him complete independence, etc. In teaching a child to ride a two-wheeled bicycle, it is easier for him to learn on a girl's bike. (The absence of the horizontal bar facilitates mounting and dismounting.) Other areas for sequencing would be for him to ride on hard-packed dirt first, then on pavement; for the teacher to run alongside and push the bicycle at first, then later let go; for him to ride on a straight path, then try curves; to ride in safe courses, then in traffic, etc.

In learning a task such as copying material from the blackboard, some sequential components are: from copying material which is familiar to the child to copying unfamiliar material, from copying material at his desk to copying from the board, and using a tilt board (at 45°) first in order to mediate transcribing from the vertical to the horizontal plane.

The handicapped learner needs support and structure. A consideration of sequentialized components of instructional tasks is a key means of affording him the "cushion" (physically as well as psychologically) he requires.

(6) *Avoid the "recipe" approach*. It is possible to write instructional sequences which are technically correct, yet are nonsupportive as far as the handicapped learner is concerned. Consider the cook's printed recipe. Obviously the steps are ordered, and the experienced cook will have no difficulty in following the steps. But the novice may not understand the meaning of "baste," "simmer," and "diced," and may require specific instruction in how to knead dough and to fold in beaten egg whites.

A carpentry shop may have the steps for sawing a piece of wood listed on a work chart in perfect sequence. However, since these did not take into account the child with perceptual and/or coordination difficulties, the pupil who needs help in actually gripping the saw, sawing on a straight line, making the initial groove, and in sawing for long periods of time will not find this kind of sequence adequate.

And in academic areas, instructional sequences must show a sensitivity for handicapped learners. Just as it is necessary to *teach* the inexperienced cook the actual motions involved in kneading and to include some supportive steps in a carpentry task analysis, instructional sequences in arithmetic and in phonics must likewise reflect teaching the needs of a handicapped learner.* For example, in teaching a child to "read" and "write" arithmetic sentences containing the "more than" and "less than" signs – >, < – a cardboard cut-out < can be used first, since it is easier to *place* the sign than to *write* it. Or, in teaching the sounds of the long and short vowels, it might be easier initially to omit the Y as a vowel, inasmuch as this may prove to be a difficult concept to grasp at the onset.

(7) *Avoid substituting a variety of activities in lieu of an instructional sequence.* At times, a teacher submits an instructional "sequence" which has the aura of appropriateness since every "step" is related to the aim. Stated simply, there are no unrelated points – and this, of course, is to be admired. A closer inspection, however, may reveal that these are really not "steps" since one point does not lead into another. The order is entirely arbitrary, and there has been no attempt to *teach* any of the points. For example, there are many ways of teaching (or to be more precise, *practicing*) subtraction. One could construct a place-value chart in conjunction with squared material, one could use coins, one could use an abacus, one could practice the written algorism, one could read and solve problems requiring subtraction with renaming. None of these activities by themselves, actually *teach* the handicapped learner, which is the stipulated aim. For example, no strategy for recognition of *when* or *how* renaming is necessary was offered.

A variety of activities should indeed be utilized, but only as substeps at a given point. In other words, a particular step in an instructional sequence may well require massive practice in a variety of ways, but variety, per se, can never be a substitute for instruction.

(8) *Become proficient in technical aspects of the instructional task*. Besides being able to write educational sequences generally, the teacher must also be acquainted with all phases of the given task's requirements. In this way, she will be able to give the child the "fine points." For example, in learning to ride a two-wheeled bicycle, it is easier to balance if one looks straight ahead rather than down and if one goes a little faster rather than more slowly. Sawing a piece of wood is facilitated by the pupil standing and working the saw at right angles to the wood. Similarly, the teacher will be better able to instruct penmanship if she, herself knows the exact formation of each letter.

(9) *Avoid scientific jargon*. Since much of the literature regarding task analysis comes to us from psychologists, the written instructional sequence often exudes a scientific aura which can overwhelm, confuse, and finally discourage teachers. Some teachers are led to believe that a sequence can't possibly be of any value if it is written simply. The scientific semblance, if it exists at all, is to be found in the written behavioral objectives. This is so because one is attempting to define *precisely* what the child will finally do as a result of instruction. It may even be interpreted as a subtle attempt to chide teachers for having been somewhat imprecise in the past. This portion of the sequence generally contains a stipulated frequency of correct response (e.g.: when shown a list of 20 three-letter short E words and 20 three-letter short A words in random order, the child will read 90% of them correct within 30 seconds.)

Now, it is true that in some instances such as decoding, reading comprehension, arithmetic computation, etc., – it may be a good idea to stipulate correct-incorrect ratios. However, at other times, it is patently unnecessary. For example, a child can either ride a two-wheeled bicycle or he can't, he can write the letter H or he can't, he can form the plural of nouns or he can't. In fact, in these instances, the "behavioral objective" does not really differ from the aim (traditionally couched in relatively general terms). It does not even have to be written out and, more likely than not, can be found in the final step(s) of the sequence.

At any rate, one teacher, when asked to

**Sequences should, of course, be designed for gifted students as well, However, the steps may be fewer, certainly the scope more advanced, and the subject matter geared toward enrichment.*

devise a sequence for teaching a child to ride a two-wheeled bicycle, offered: *"Behavioral Objective* – to determine the degree of visual/motor development and physical integration to enable the child to mount and pedal a bike while maintaining balance and directionality."

To which the instructor inscribed the incisive comment, "Wow!"

(10) *Don't just present, teach.* If it is true, as we believe, that the "heart" of teaching is imparting knowledge or a skill, then this tenth guideline must be considered the heart of instructional sequencing. Most adequate learners learn when material is presented to them. The excellent student may even be able to figure out on his own that in the numeral 25, the 2 represents 2 tens and the 5 is really 5 ones. Out-of-school experiences with equivalencies in money and making change (quarters, dimes, and nickels) might well have given him this understanding and he may even have made the generalization into other two-place numerals.

For most of the other children a simple demonstration or verbalization by the teacher will serve to link up their previous experiences and they, too, will understand what the digits 6 and 7 in the numeral 67 represent.

The handicapped learner (in any particular area) is the one who doesn't "get it" when the teacher has only said it or shown it. He needs more than that. The instructional sequence is the "more" that he needs.

How does the teacher who has written a sequence decide whether or not she is really teaching and not just presenting? There are two specific pitfalls. First, if the sequence does not require the child to *do* anything, the teacher can have no certainty that the child has learned anything or that she has taught anything. If, in a sequence to "teach the difference between S and Sm," the steps enumerate only what the teacher will do and say (e.g., (1) teacher puts S and Sm on the board, (2) she speaks the sound of each, (3) she gives a word or several words beginning with S or Sm as examples for each), then she is merely presenting the material, not teaching it. And on the basis of this "teaching," the sequence writer may now expect the child to demonstrate what he has "learned" by doing the typical workbook exercise. This usually requires him to look at a picture, perhaps of a smoking chimney, and choose correctly from two or more answers. He will then mark an X in the box labeled "Sm" rather than "S" or "Sp," etc. This, then, becomes the second pitfall to avoid. It is an example of expecting the child to do something *without* instruction. If he can do it, then he didn't need any teaching in this area. He may already have known how to differentiate S from Sm. Perhaps he was able to make the correct generalization merely from presentation. On the other hand, the child who responds to the worksheet by saying "I don't understand," or who tries to complete the task and gets almost all of the items wrong, or perhaps just goes through the page and merely marks an X on anything he sees, is the candidate for a good instructional sequence.

Now the sequence writer is beginning to see the light. A glimmer may be coming through. Having presented the aforementioned material, the teacher recognizes that one or more children need more instruction. They are ready to learn this material but they will not be able to do so without direct intervention by the teacher. A possible sequence for *teaching* a child to differentiate between the S and the Sm sounds may be written such as the following example.

BEHAVIORAL OBJECTIVES

(1) Given 20 words beginning with S or Sm, the child will be able to identify the initial consonant sound or consonant blend with 90% accuracy.

(2) Given 20 letter clusters (e.g., ile, ort, ell) and told how each sounds, the child will be able to vocalize the whole word formed when S or Sm is put before the cluster with 90% accuracy.

Prerequisite for learning from instructional sequences. The child has demonstrated that he auditorially recognizes and can produce (vocalize) the sounds of all the consonants. (If the student who failed to learn the S-Sm lesson did so because he did not know the individual consonant sounds, then no sequence written to teach the former is good for him because he is not yet ready for it.)

PROCEDURES

I. Review sound of S.
   A. Teacher makes the pure sound (S is not attached to any word) and the child names the letter.
   B. Teacher points to the letter (on board or paper) and the child makes the sound.

II. Introduce the Sm sound.
   A. Teacher makes the pure sound and the child names the letters given. Both S and Sm are written prominently on the board or on paper.
   B. The teacher points to the Sm and the child produces the pure sound.

III. The child is required to differentiate between the pure S and Sm sounds.
   A. The teacher makes one of the pure sounds and the child is required to name the letter or letters she has sounded. (The teacher will require that the child do this five out of five tries before proceeding.)
   B. The teacher points to either S or Sm and the child is required to produce the sound pointed to. Five out of five correct tries are required before the teacher goes on.
   (Modification: Sometimes a child demonstrates that he cannot correctly reproduce the blended sound. He may put in extraneous sounds (e.g., "suh em") or even produce an Sn sound. At this point the sequence has to stop and a new sequence developed to teach the child *how to blend.*)

IV. Add a nonsense syllable to the pure S and Sm sounds.
   A. The teacher explains that she will be adding the sound "ah" to the S and Sm. She demonstrates how each will sound – "sah," "smah."
      1. The teacher makes the sound and the child tells which one he has heard (by pointing to it or if it is labeled by saying its number, e.g.: 1) sah, 2) smah). The child must be able to correctly identify five out of five before the sequence proceeds.
      2. The teacher points to the sound and the child produces it. The rule of five out of five correct holds true here. (It may be at this point that the blending ability breaks down and a new sequence must be introduced.)

V. Introduce S and Sm in actual words.
   A. The teacher vocalizes a word and the child is asked to tell whether it begins with S or Sm. If he can do this with 90% accuracy when given 20 different words, then the first behavioral objective has been achieved.
   B. A letter cluster is written on the board (or paper) and its sound is told to the child if he does not know it (e.g., ell).
      1. The teacher asks the child to tell what word it created when the S is put in front of the written "ell."
      2. The teacher continues this with 20 prepared letter clusters (or families) and varies the S and Sm placed before them. The consonant or the blend plus the cluster must make a real word.
         a) If the child can achieve 90% accuracy in this task, then the second behavioral objective has been achieved.

It should be noted that the above sequence is quite limited in scope. The best way to develop competency in sequence writing is to start with the tangible skill subjects such as phonics, math, or penmanship. These areas lend themselves to a circumscribed and well-defined aim. If the teacher's aim is simple and definite enough, it is more likely that her thinking will be focused upon component sequential steps. Later, more abstract subject areas can be approached.

It must be obvious that recognizing and producing the S and Sm sounds is a "splinter" skill. As an isolated sequence, it would have little meaning for the child who does not generalize easily. It isn't likely that even a superb young learner could make *all* the generalizations necessary to render this specific skill a useful one. However, building upon this sequence to include *every* S blend and to teach the child sequentially to differentiate among them, builds toward the ultimate goal of decoding new words phonetically. Similarly, when the teacher prepares an instructional sequence whose aim is that the child produce the cursive letter l, she knows, of course, that finally the child will be taught to write words, sentences, and paragraphs ideationally in cursive script. In organizing her thinking to write the sequence for the letter l, she develops her own skills in following through with further sequences geared towards the final goal. Hopefully, the teacher recognizes that the individual letters thus taught will be linked to form words, then sentences, and finally paragraphs. First, the material is copied (from a paper on the desk and then from the chalkboard and ultimately from oral dictation). When competency has been achieved the child's creative writing will be done in cursive script.

If it seems to you that the above is really only simple common sense and not different from the way any good penmanship workbook is arranged, you are quite correct. But recall now guideline #6 – Avoid the "recipe approach – and remember that the handicapped learner will probably require insightful modifications: extra practice, initial short doses of written work, more experience in tracing, actual physical guidance by the teacher grasping his writing hand, directional and/or color-cuing, specially printed paper, cuing for correct word space (finger distance), etc.

All of these guidelines can be encapsulated in two prepotent principles: (1) Stipulate that the given child is absolutely ready for your sequence, but that (2) he is utterly incapable of learning it without specific instruction. The first insures that the teacher will not spend time in needlessly reviewing prerequisites; in projecting extraneous material which, however creative and clever in appearance, is totally irrelevant; or in attempting to motivate the already motivated child. The second enhances the likelihood that the teacher will not substitute a variety of unconnected and unordered activities (albeit pertinent to the lesson's aim) for ordered step-by-step instruction, will not offer a technically correct yet unmodified, nonindividualized, and nonsupportive recipe, will identify sequential components of the instructional module, will become aware of the technical aspects of the task, and, above all, will show a healthy respect for the difference between teaching and merely presenting.

Today, as always, there are numerous instances of superb, systematic, sensitive, master teachers. It is a tribute to them that they succeed despite the overall dearth of precise guidelines emanating from preservice or inservice sources. Call it love of children, instinct, creativity, a propensity to empathize with the handicapped learner and thereby glimpse his needs, whatever. Perhaps when we identify the forces which account for this spontaneous generation of excellence of teachers, we will come close to answering the final question: How can the "art" of teaching best be taught? – *14-16 217th St., Bayside, N.Y. 11360.*

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Handout 2

Essential Steps in Task Analysis

The following example is the start of a discrimination analysis of the task of *stating the time when given clocks showing only "on the hour" arrangements of the hands.* (The clocks only point to one o'clock, two o'clock, etc.) Again correct and incorrect analysis statements are given. Place a check mark by each essential step.

A. Assumptions about entering behavior (it is assumed that the student can:)
   1. recognize the numbers 1-12 and say them when displayed.
   2. recognize the one-to-one relationship between the numbers 1-12 and one to twelve items.
   3. discriminate between the relative temporal relationships of "before" and "after."

B. Task analysis: In order to perform the final task the student must be able to:

Recognize the difference in size between the two hands on the clock.
Understand that "time goes by."
Recognize the relationship between the "big" hand and the term "o'clock."
Be able to adjust a clock to indicate proper time.
Recognize the relationship between the "little" hand and the time designation.
Recognize the difference in rate of movement between "big and little" hands.

Suppose we wanted to develop a visual perception nature study program on the task of naming oaks, birches, poplars, maples, and elms when shown either the tree shape, the bark, or a leaf. Listed below are discriminations which would be a part of doing that task and behaviors which would not be a part of the discrimination analysis.

In order to do the final task, the student must be able to do which of the following:

Identify the difference between the shape of an oak leaf and a maple leaf.
Draw an oak leaf
Recognize the difference in the texture of birch and popular trees.
Recognize the difference between the root structure of trees and house plants.
Recognize the difference in limb structure between a birch and an elm.
Be able to spell the words, "oak," "birch," "maple," and "elm."

INSTRUCTOR KEY

Handout 2

Essential Steps in Task Analysis

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   3. discriminate between the relative temporal relationships of "before" and "after."

B. Task analysis: In order to perform the final task the student must be able to:

(Correct)	Recognize the difference in size between the two hands on the clock.
(Incorrect)	Understand that "time goes by."
(Correct)	Recognize the relationship between the "big" hand and the term "o‘clock."
(Incorrect)	Be able to adjust a clock to indicate proper time.
(Correct)	Recognize the relationship between the "little" hand and the time designation.
(Incorrect)	Recognize the difference in rate of movement between "big and little" hands.

Suppose we wanted to develop a visual perception nature study program on the task of naming oaks, birches, poplars, maples, and elms when shown either the tree shape, the bark, or a leaf. Listed below are discriminations which would be a part of doing that task and behaviors which would not be a part of the discrimination analysis.

In order to do the final task, the student must be able to do which of the following:

Appropriate to the task	Identify the difference between the shape of an oak leaf and a maple leaf.
Not appropriate to the task	Draw an oak leaf
Appropriate to the task	Recognize the difference in the texture of birch and popular trees.
Not appropriate to the task	Recognize the difference between the root structure of trees and house plants.
Appropriate to the task	Recognize the difference in limb structure between a birch and an elm.
Not appropriate to the task	Be able to spell the words, "oak," "birch," "maple," and "elm."

Handout 3

Introduction to Task Analysis

Note: The following activity should be performed in small groups or with a partner if possible.

(1) Choose an academic task and write a terminal objective for that task.

(2) Identify and sequence the subtasks which, when mastered, will enable an individual to meet the terminal objective.

(3) Write each subtask on a separate 3x5" index card. Be sure to include the terminal objective on one card.

(4) Number each card on the back according to the placement of that subtask in your sequence.

(5) Shuffle your task cards so that they will be out of sequence and place the terminal objective card on top.

(6) Give your task cards to the instructor for exchange with another group.

(7) When you receive another group's set of task cards, sequence the tasks as a group. Compare your group's sequence to that of the group which developed the sequence by checking the number on the back of each card. Discuss any discrepancies in your sequences as well as any additional subtasks which you would recommend.

(8) Record 2 task analyses on which your group has reached consensus and save them for a later activity.

Task Analysis: The Processing Dimension

John Junkala

TASK ANALYSIS is a skill which can be acquired by any teacher and which can be applied to a wide array of instructional problems. The ability to analyze tasks allows the teacher to look for trends in a student's task performance, and to modify task components during an instructional session, thus giving the teacher some of the "flexibility" that we are so often told is needed. This ability further allows the teacher to design tasks with specific components to match student readiness at any given time.

I view task analysis through the dimension of *cognition*, *process*, and *affect*. Figure 1 illustrates the relationship between cognition and process. In another article I have described the cognitive dimension, moving from the perceptual level, up through coding, to the highest cognitive level, that of concept formation.[1] To my knowledge nothing has been written that relates affective functioning directly to task analysis. This dimension would most likely incorporate such topics as motivation and interest, as well as good mental health practices in general.

This article will attempt to explain my ideas about the *processing* dimension of task analysis. By *processing* I mean the operations through which an individual receives, organizes, and

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John Junkala. Task analysis: The Processing Dimension. *Academic Therapy*, 8, 4 (Summer

transmits information. Any task is composed of three major sets of processing demands:

- INPUT: The student must be able to receive and organize the directions and materials presented to him.
- ASSOCIATION: The student must be able to switch input information into output modes.
- OUTPUT: The student must be able to make the response he has chosen.

Figure 1

The Cognitive and Processing Dimensions of Task Analysis

		COGNITIVE		
		Perceptual	Coding	Conceptual
PROCESSING	Input			
	Association			
	Output			

Output

I will discuss *output* first, because regardless of the nature of the learner's problem it is manifested in his output. There are only a limited number of ways in which we can make responses, and they are summarized in Figure 2.

Figure 2

Output Modes

	Verbal	Nonverbal
Vocal		
Motor		

1973): pp. 401-409

When we say words, phrases, sentences, or numbers we are broadcasting vocal/verbal output. When we hum a tune or imitate a bird call, we are broadcasting vocal/nonverbal output. Motor/verbal output takes the form of responses that are written in words, phrases, sentences, or numbers. Motor/nonverbal output is any other body response, such as pointing to or underlining the correct answer, pantomiming the answer, raising a hand when the correct answer is seen or heard, or drawing a picture.

Once we have described the output demands of a task it only remains to be seen if the student can deliver an acceptable response within the called-for output format. If he can, all is well. If he cannot, then we want to learn as quickly as possible whether his problem is merely one of being unable to provide the answer in the output format called for, which would truly be an output problem, or whether the problem lies in associational or input areas, or in some combination of these.

Let's take for example an activity where the teacher tells the student to look at the globe and tell the class the latitude and longitude of Savannah, Georgia. The output demand of this task is clearly vocal/verbal. Now suppose the student is unable to give an acceptable response. The teacher then tells him to go to the board and write the coordinates. This the student does successfully. The teacher has switched the output demands of the task, while leaving the cognitive aspect of the task unchanged, and the student has responded successfully. The obverse of this is the student who, when told (but not shown) to write a set of map coordinates and find them on the globe, cannot write them correctly, but can repeat them accurately and can go to the globe, plot them, and tell what he finds at their intersection. In each case the teacher discovered that the students understand the input and are able to arrive at correct solutions, but are unable to respond within the originally prescribed output format. In each case it is entirely possible that the students have difficulties in forming motor plans—in the case of the first student for saying a complex response, and in the case of the second for writing a complex response.

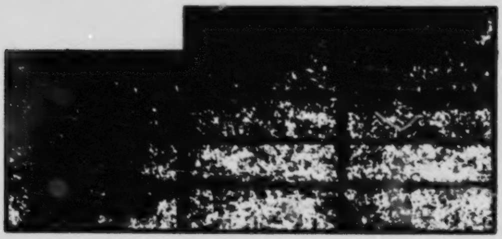
It is also quite possible that what appear as output problems really have a different cause, which I intend to discuss later.

Input

Input is described in terms of the verbal or nonverbal nature of the incoming stimulus sets, in combination with the sensory modalities which must receive and organize them. Input parameters can be described within the matrix contained in Figure 3.

Figure 3

Input Modes



In presenting this matrix before groups and to my colleagues, the only cell they have questioned me about is tactual/verbal. I would consider a Braille character an example of this. Once in a while a task has an olfactory or gustatory input component, but I won't bother to list them as matrix rows. We can just assume they are there if needed.

The directions to most tasks for young school children and for students with learning problems contain procedures which are auditory/verbal. To concentrate on the actual essence of a task when looking at its input demands, however, I usually begin my analysis at the point where the child understands what it is he is supposed to do. Take, for example, a visual discrimination task where the child is given a line of geometric shapes on a sheet of paper, and the teacher says, "See this one? Now look over here and find one just like it and make a line under it." I would describe the input as visual/nonverbal. Obviously the teacher's directions were auditory/verbal, but I would ignore this in my initial analysis in order to concentrate on the actual substance of the activity.

Let's take another task. The teacher presents a row of pictures and says, "When I say the name of a letter, I want you to point to a picture that begins with that letter." I would not include these instructions in my analysis of the input, but would begin when she actually presents the task itself—that is, when she says "b," (auditory/verbal), and gives the child the pictures to inspect.

In the task I described earlier, where students were working with a globe, the teacher's directions were within the substance of the task, so I included everything in my input analysis: teacher's directions (auditory/verbal), the globe (visual/nonverbal), and the characters on the globe (visual/verbal). There is, admittedly, a gray area here between procedural and substantive directions, but it is not a critical one because task analysis is not an end in itself which must remain at all times absolute: it is rather a means to understanding what we are asking a child to do.

An obvious question is: How can I justify ignoring the teacher's procedural directions? What if the child has an auditory handicap? My reasoning is that the common denominator *auditory/verbal input*, which runs through the directions to so many tasks, is so general as to be unhelpful. Whether the child's auditory problem is severe or subtle, we must learn about the *types* of auditory components that are giving him the most trouble.

My method gives us a way of checking this out. After giving him an array of tasks, we can take a close look at the ones he failed and look for common characteristics among their input components. They would all have in common the teacher's auditory/verbal directions, so that would be of no help. If the substantive input of the failed tasks included auditory/verbal material, then that would be another matter: at the very least it would give me a quickly testable hunch about a possible source of difficulty.

This hunch could lead me in two possible directions. I could ask for a formal appraisal of his auditory capabilities or—and to me this is the better direction—I could restructure the failed tasks by modifying or reducing the auditory/verbal input components to see how well he could perform the task without these demands being made on him.

Let us take, for example, the task where the teacher said, "When I say the name of a letter, I want you to point to a picture that begins with that letter." The goal of such a task is to help build sound/symbol relationships. Cognitively speaking, it is a coding task. The child must inspect the pictures, say each one to himself, and revisualize the initial letter of each pictured object in order to pick out the one that begins with the letter presented by the teacher. If a child had difficulty with this task I would immediately switch input modes from auditory/verbal to visual/verbal; in other words, I would show him the letter on the board or on a card. This does not change the cognitive aspect of the task, it merely changes input pathways.

If a student had difficulty with dictation assignments—for example, if the teacher describes a math problem to the class and tells them to take notes and then solve the problem—one of the very first things I'd do would be to present him with the problem in writing, to see if changing input modes would help him. If this type of move checked out, I'd pass the word along to his regular teacher and suggest that for activities where writing from dictation is a procedural part of the task (and not an end in itself, as a spelling test), she ought to give the student the material in visual form, or to give the child next to him an extra piece of paper and a sheet of carbon paper to make a quick copy ~~for him~~.

In connection with these types of moves I am often asked whether it is preferable to bypass the handicap as I've just described, or to attempt to remediate it. My answer is that first we've got to discover what the handicapping condition is, and looking at input/output components can often give us some very real clues. Once we have tried switching these processing components, without changing the cognitive nature of the task, and have had a hunch reinforced by the student's increased ability to make acceptable responses, then we can face the question squarely, and make a decision based on the amount of time available for working with him, and the amount of help that must be given his regular teacher. The task analysis technique I am describing here is a means of helping educators to assemble the information needed to make such decisions.

Association

We can describe input with precision because these are the things we give children to look at and listen to. We can do the same with output because these are the responses children make. We cannot see *association*. That is an internal process, and it can only be inferred by looking at input and output demands over a wide range of failed tasks.

There are two major types of associative demands. One is that of changing input stimulus energy, usually auditory or visual, into vocal or motor output energy. Doris Johnson and Helmer Myklebust have borrowed the term *transducing* from the science of physics to describe this type of energy transformation.[2] The other demand is that of retrieving from storage either a visual impression of what was just heard, or an auditory impression of what was just seen. These last two abilities are referred to as *revisualization* and *reauditorization*, When we ask a child to spell a word or draw a map of his bedroom we are asking him to revisualize. When we ask him to "sound out" a word or to tell us what he is looking at we are asking him to *reauditorize*.

Let's look again at the globe activity I described earlier. It was presented as an output problem because each student knew what he wanted to say or write but was unable to perform the motor movements necessary to do so. Let's assume that the teacher gave the first student (the one who couldn't say his answer) a wide variety of complex statements to repeat and that the student was successful in repeating them (input: auditory/verbal; output: vocal/verbal). We would then give much less credence to the original output hypothesis because the student showed that he does have the ability to plan and carry out a motor speech pattern. There is no apparent problem either with input or output. There is no apparent problem in transducing incoming auditory energy into outgoing vocal energy. We are left then with a strong hunch that the problem may be one of *reauditorization* because although he can find, point to, and write the globe coordinates, he cannot say them. If this type of performance emerged as a trend over a variety of tasks then the hunch would be confirmed strongly enough to allow the teacher to generate some instructional alternatives. The most obvious one would be to bypass the problem by avoiding this type of processing demand altogether. If a decision is made instead to remediate, the teacher could provide clues to help the student reauditorize material that is presented visually. One move in this direction could be to present the original task in multiple-choice form: "Are they 32N81W, 44N90W, or 62N90W?" In other words, the reauditorizing demand could be changed from one of total recall to one of recognition.

For another example, let's go back to the child who had trouble with tasks involving writing from dictation. If experience shows that he can copy sentences accurately, we can rule out input and output deficiencies, as well as associational deficiencies of the transductional type. A strong hypothesis here would center around his ability to revisualize. Word could be passed along to his regular teacher to give him as many visual clues as possible. Perhaps a list of commonly used words could be taped to a corner of his desk. He might benefit from visual closure tasks, where he is given almost but not quite all of the visual information, and is required to tell what the picture or word is. Children with this problem benefit from multiple-answer tasks where they have a chance to recognize the right answer rather than being forced to revisualize it from scratch. The specialist and the classroom teacher might jointly plan a series of activities for this child that would lead from recognition to revisualization by gradually decreasing the visual clues present in the material. Remember now, this child as I've described him has neither an input nor an output problem. He has an associational problem wherein he has difficulty in retrieving visual impressions of words he hears. He should be given many opportunities to practice visual closure, just as you are doing when you read this page. Chances are that you didn't spend much time on the second syllable of the word *closure* in the preceding sentence. You got enough information from the *clo-* so that you could pretty well predict what the remainder of the word would be. You were able to perform closure quickly—that is, to revisualize the whole word from the partial information contained in its first syllable.

The Teacher's Directions

As I've said, associational problems can only be inferred by observing performance over a wide array of tasks. This makes it imperative that the teacher be aware of exactly what the student is being told to do, and observe accurately what the student actually does. I've said that I begin my analysis of a task at the point where the teacher has finished giving the procedural directions and is now presenting the actual input content. This does not mean that I ignore the initial directions. I pay close attention to them to see if she can subsequently relate what the children *do* to what she *told* them to do. I once observed a teacher presenting a language lesson to four third-grade children with learning problems. Her directions were something like, "I'm going to say some words. Each time you hear the name of a vegetable I want you to raise your hands." The analysis of such a task is fairly straightforward—input: auditory/verbal; association: revisualization; output: motor/nonverbal. The cognitive demands of the task were at a conceptual level. She went through her list of words and seemed pleased that the children raised their hands at the right time. What she didn't seem to be aware of was that they never raised their hands simultaneously, but did so in a staggered order. It's quite possible that three of them were taking their cues from the fourth. The teacher assumed that the task's input was auditory/verbal, but for three of the children it could easily have been visual/nonverbal (seeing the fourth boy raise his hand). They could have been functioning at a perceptual, rather than a conceptual, level. How easy it would have been to seat the children with their backs to each other for this particular lesson!

In summary, the ability to analyze the informational processing demands of tasks we present to students allows us to systematically detect trends of weakness or strength in their abilities to meet our demands. The rapid acquisition of this type of information then allows us to generate alternative approaches to instructional problems.

NOTES

1. John Junkala, "Task Analysis and Instructional Alternatives," *Academic Therapy*, Vol. VIII, 1 (Fall 1972), 33.
2. Doris J. Johnson and Helmer R. Myklebust, *Learning Disabilities: Educational Principles and Practices* (New York: Grune & Stratton, 1967), 28.

LIFE THE WAY IT IS

Life is a bet, like a gambler's
   bet his money on games.
Life is the way you make it,
   as an artist creates a picture.
Life is doing what makes sense,
   not what someone tells you.
Life can be hard, doing things you
   do not like to; hard as a rock.
Life can be soft, easy off and
   sleeping, like a soft kitten.
On the road of life walk straight,
   like a tightrope walker making
   sure he does not fall.

David Levin
9th Grade
Baltimore, Md.

Handout 4

A Revised Format for Task Analysis

		Modality Processing Demands		
	Original Task Analysis	Input Modes	Output Modes	Alternative Tasks
Instructional Objective				
Subskills				
Begin Instruction				

Entering Behavior Prerequisites

5.

4.

3.

2.

1.

SELECTING INSTRUCTIONAL ACTIVITIES FOR A STUDENT'S STRENGTHS AND WEAKNESSES

by
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Individualizing instruction requires that a teacher be able to plan activities for a student that can accommodate the student's areas of weakness as well as challenge the student in areas of strength. This module provides opportunities for preservice teachers to develop skills in the identification and modification of instructional arrangements to maximize student growth based upon observations of a student's strengths and weaknesses.

Student Outcomes

Upon completion of the module the student will be able to modify instructional activities for a learner on the basis of his/her observed strengths and weaknesses.

Instructor Information

Prerequisites:

The student should be able to assess, recognize and describe the strengths and weaknesses of both normal and atypical learners. The student should also be able to complete a task analysis, sequence skills, and write appropriate behavioral objectives for the needs of the learner.

Organization:

The one terminal objective of the module is that the student will be able to recommend modifications in instructional activities for a student on the basis of his/her observed strengths and weaknesses. Five student objectives lead to this terminal objective. The activities include information on how the instructional process is facilitated and/or modified based upon classroom situations, personnel arrangements, time arrangements, and teacher behaviors.

Content Overview:

The module is entirely activity based. The students use a checklist to organize observations of one child in a field experience setting; based on these observations the student completes a checklist to identify the childs needs associated with the classroom, personnel, time and the teacher. Through group discussion, classroom modifications and other arrangements which may enhance the child's school program are identified and evaluated.

Suggestions for Teaching:

It is essential that the module be delivered in a course that provides a practicum or school experience component. As the module is entirely activity based, the instructor needs only to review with students the Instructional Assessment sheet and Observational Guidelines at the outset and guide the final group discussion. Approximately two hours of in-class instructional time will be needed for the overview and group discussion.

Evaluation:

The results of the activities are discussed and comparisons are made by the teacher trainees.

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P. Jeannie Kleinhammer

Prospectus

Individualizing instruction requires that a teacher be able to plan activities for a student that can accommodate the student's areas of weakness as well as challenge the student in areas of strength. This module provides opportunities for preservice teachers to develop skills in the identification and modification of instructional arrangements to maximize student growth based upon observations of a student's strengths and weaknesses.

Student Objectives	Enabling Activities
1. The student will briefly describe a learner and identify his or her strengths and weaknesses on the basis of observations in a field experience.	1. Class activity: Each student should select one learner to observe during the field experience, using selection criteria in Handouts 1 and 2, Observational Guidelines and Student Profile: Short Form.
2. Based on observations of a learner's strengths and weaknesses, the student will list classroom situations available and/or modifications necessary to enhance the progress of that learner. 3. Based on observations of a learner's strengths and weaknesses, the student will list personnel arrangements available and/or modifications necessary to enhance the progress of that learner. 4. Based on observations of a learner's strengths and weaknesses, the student will list time arrangements and/or modifications necessary to enhance the progress of that learner. 5. Based on observations of a learner's strengths and weaknesses, the student will list teacher behaviors exhibited and/or recommended changes in teacher interactions with the learner to enhance the progress of that learner.	1. Class activity for student objectives 2-5: Students should complete Handout 3, Instructional Assessment sheet based on observations of one learner described for Student Objective 1. Instructional assessments will be enhanced if four separate 30 minute observations are made and each portion of the Instructional Assessment sheet is completed immediately after the observation. The student may find it necessary to interview his or her cooperating teacher or the building principal to list available personnel arrangements.

Evaluation: Based on observations of a learner's weaknesses, the student will recommend modifications in instructional activities for a learner which will enhance the progress of that learner.

On completing the Instructional Assessment Sheet, students should be prepared to present a brief discussion of their observations and recommended modifications to fellow classmates.

Handout 1

Observational Guidelines

1. Choose 1 student in your class to observe. Choose a student who appears to have difficulty in one or more of the following areas,

    1. Attention problems
    2. Behavior problems
    3. Listening/hearing problems
       Difficulty following directions
    4. Visual problems:
       Problems with copying
       Problems understanding charts, etc.
    5. Academic problems
       Reading
       Math
       Spelling
       Other
    6. Writing problems
    7. Language problems
    8. Physical handicap

2. Describe the student briefly on the attached page. *Do not* refer to the student by *name.*

3. Observe the student for at least 10 minutes in each of the following settings: (If student never works in one of these settings, please indicate)

    a. Large group
    b. Small group
    c. Individual work (with teacher, peer tutor, or alone)

4. Use your answers to fill in the Instructional Assessment Sheet. Use Description of Instructional Settings as a guide.

Be prepared to discuss your observations in class.

Handout 2

Student Profile: Short Form

Description of Student

1. Age ___

2. Grade_____

3. Sex ______

4. Problem Areas	5. Strengths (be *sure* to *include*)
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.

6. Setting in which student most often works ________________________________

7. Location in which student works ________________________________

8. Differences in curriculum, instructional equipment, etc., and purpose as you perceive it: ________________

9. Ancillary personnel available in the school (please list all) ____________________

10. Check ancillary personnel who provide services to the student you are observing

11. Teacher behaviors:	Seldom		Frequent
How often does teacher call on student	1	2	3
How often does teacher work with student on 1-1 basis	1	2	3
How often does teacher scold student	1 1	2	3
How often does teacher praise student	1	2	3

12. Other comments

13. Complete the attached checklist

Handout 3

INSTRUCTIONAL ASSESSMENT SHEET

P. Jeannie Kleinhammer, 1975

ASSESSMENT OF STUDENT	INCONSISTENCIES IN PERFORMANCE	ASSESSMENT OF ENVIRONMENTAL FACTORS	NEW ARRANGEMENTS YOU MIGHT MAKE
Classroom Situation Assessment			
1. Does (s)he learn best through group or individual activities?________		1. Are facilities available for large and small group interaction in the classroom?________	
2. Where does (s)he learn? a. In the classroom 1. Large group activities ________ 2. Small group activities________ 3. Individually oriented activities________ 4. Activity centers ________ b. Special room 1. Reading room ________ 2. Library ________ 3. Resource teacher________ 4. Media Center ________		2. Are individual study areas available (i.e., portable bookselves or bulletin boards) that can be used to divide the areas?________	
3. Is (s)he easily distracted by other students?____		3. Are small rooms available within the building for subdividing the class into subunits?________	
4. Does (s)he interrupt his/her own learning by talking or disturbing others?________		4. Are learning carrels available? (Portable desk top carrels or cardboard boxes)________	
5. Does (s)he need help with organizing materials? ________		5. Does the student have his/her own desk or cupboard where (s)he can store his/her personal material? ________	

ASSESSMENT OF STUDENT	INCONSISTENCIES IN PERFORMANCE	ASSESSMENT OF ENVIRONMENTAL FACTORS	NEW ARRANGEMENTS YOU MIGHT MAKE
Classroom Situation Assessment			
6. Does (s)he need extra devices to learn; for example, tapes records, filmstrips?________		6. Are book corners readily accessible to the student? ________	
7. Is (s)he sometimes explosive or easily provoked by other students? ________		7. Are there facilities available in the room or in the school for crisis intervention? (time out room, counselor's office, etc.) ________	
8. Is (s)he very active or restless? Does (s)he seem to need to let off steam? ________		8. Are activity centers available (i.e., communication centers, science centers, etc.)? ________	
9. Does (s)he learn best by activities–by moving about and doing experimental or manipulating things? ________		9. Is there an area around the building that can be used of exploration? ________	
		Are there large areas available in the building or outside that can be used for play activities, drama presentations, etc.? ________	

ASSESSMENT OF STUDENT	INCONSISTENCIES IN PERFORMANCE	ASSESSMENT OF ENVIRONMENTAL FACTORS	NEW ARRANGEMENTS YOU MIGHT MAKE
Personnel Analysis			
1. Does (s)he learn best with an adult, teacher, volunteer, aide, student teacher? ____		1. What is the ratio of students to teachers? ____	
2. Does (s)he learn best with a peer or older student? ____		2. What personnel are available to help in the personalizing approach? (If one is listed below*, if appropriate to student need.) 1) Teacher Aide, 2) Resource person, 3) Volunteer, and 4) Tutor ____	
3. Does (s)he learn best in group or individual activities? ____		3. What ancillary support personnel are available in the building and school district?** ____	
4. What areas of learning does (s)he accomplish best with adults? With peers? ____		4. In what activities does (s)he work along? In groups? ____	
5. Are ther specific people (s)he avoids? Is there anything in common about them? ____		5. What reinforcement strategy do you use? Do his other teachers use?	

other teachers use?	YOU	OTHER TEACHER
1. None	__	____
2. Immediate	__	____
3. Delayed	__	____
4. Social	__	____
5. Tangible	__	____
6. Punishment	__	____
a. Tell student he's doing badly	__	____
b. Failing grades	__	____
c. Sends student out of room	__	____

* Community volunteers, senior citizens, peers, older students, teacher aides, student teachers, interested parent group.

** Music, PE, curriculum specialists, resource teachers, speech clinicians, social workers, psychologists, nurses.

ASSESSMENT OF STUDENT	INCONSISTENCIES IN PERFORMANCE	ASSESSMENT OF ENVIRONMENTAL FACTORS	NEW ARRANGEMENTS YOU MIGHT MAKE
Time Factor Assessment 1. What is his/her time schedule of classes? List below.		1. What time of day does (s)he appear to learn best? a. before mid morning ______ b. fefore lunch _______ c. early afternoon ______ How long can (s)he stay with an activity and what kind? (activities involving movement movement ___ , talking____, specific subjects______, seat work__________, reading ___________, others_____________. When does (s)he have difficulty attending?_______	
Teacher Behavior Assessment 1. Can the activities be mostly self-directed? a. Is the student self-directing? b. Is the student a reader? c. Is the student a self directing but a non-reader?		1. If you answer YES to 1.a and 1.b: Have you used: Programmed Instruction________ Job Sheets_________________ Activity Cards________________ Learning Centers______________ Learning activity packets_________ Contracts____________________ Language Master_______________ If you answer YES to 1.c., have you used: Audio Tapes_______________ Peer Tutors________________ If you answer NO to 1.a., have you used: Teacher aides_____________ Resource Persons__________ Volunteers_______________ Tutors__________________	
2. Does the student read but have difficulty with the text?_______________________________		2. Have you tried a different text?______________	

ASSESSMENT OF STUDENT	INCONSISTENCIES IN PERFORMANCE	ASSESSMENT OF ENVIRONMENTAL FACTORS	NEW ARRANGEMENTS YOU MIGHT MAKE
3. Can the student listen to instructions and follow them?		3. Are instructions simple? ____ a. Is your vocabulary simple and consistent? ____ b. Do you organize information before telling the student what to do? ____ c. Do you demonstrate the desired behavior? ____ d. Do you provide prompts? ____ e. Do you provide physical guidance when needed? ____	
4. Can the student read instructions and follow them?		4. a. Do you limit written instructions to one task per set of instructions? ____ b. Do you use a standard format for instructions which the student can recognize? ____ c. Have you asked the student to repeat back instructions so that you're sure (s)he knows the exact demands of the task? ____ d. What cues do you provide to tell the student that a task is completed? ____ end of page? ____ word "stop" ____ other? ____	
5. What type of input does the student respond to most easily? a. Can the student watch a demonstration then perform the steps himself? ____ b. Can the student recall a sequence of instructions which he sees? ____ hears? ____		5. a. What type of input do you give the student most often? Visual? ____ Auditory? ____ Crossmodel? ____ b. Is the input concrete or abstract? ____ c. Is the rate of input appropriate? ____	
6. Can the student make the necessary response to a task? What does he do poorly or well: draw? ____ write? ____ speak? ____ paint? ____		6. What kind of response is most often required of the student? Expression by: Writing? ____ Drawing? ____ Pointing? ____ Speaking? ____ Have you asked the student to make a different kind of response? ____	

INDIVIDUALIZING INSTRUCTIONAL MATERIALS AND MEDIA

by
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Selecting appropriate media/materials for individualized instruction is a process that can only be carried out by the teacher. Other school personnel may serve as resources for information but ultimately the teacher must make the decision as to which media/material will be used and what modifications must be made in that material selected.

Student Outcomes

Upon completion of this module, the competent teacher can individualize instructional media/materials to meet the needs of exceptional learners.

Instructor Information

Prerequisites:

The teacher trainer will need to have knowledge of the characteristics of exceptional learners, teaching techniques appropriate to exceptional learners and skill in task analysis and sequencing of instruction.

Organization:

The module is organized around three terminal objectives related to the analysis, selection and modification of instructional media/materials for handicapped learners. There are a number of readings and activities related to each of these objectives. The activities require that the teacher trainee apply information from the readings to the processes of analysis, selection, and modification.

Content Overview:

The readings provide specific guidelines for the processes of analysis and selection of media/materials. There is also some information on the modification of materials. The activities are designed to afford the trainee opportunities to apply the knowledge to materials and to utilize student profiles for the processes of selection and modification. The readings could have application to planning individualized instruction for both normal and atypical students.

Suggestions for Teaching:

The module will require approximately three hours to deliver and should, if possible, be combined with a student teaching experience. Such a combination would allow for actual application of the skills to a student in a classroom. If this is not possible, simulation data would have to be supplied.

Evaluation:

The evaluations are carried out as a part of the discussion and participation of the class. Each of the activities may be presented for group reaction.

INDIVIDUALIZING INSTRUCTIONAL MATERIALS AND MEDIA

by
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Prospectus

The analysis, selection and utilization of instructional media/materials in one of the major roles of a teacher. When programming for exceptional learners, these tasks must be performed more frequently and on an individual rather than group basis as with students without learning problems. This module provides a series of activities that will help you understand the processes involved in selecting appropriate media/materials for exceptional learners.

Student Objectives	Enabling Activities
1. The teacher trainee will state components essential to the process of media/materials evaluation.	1. Reading 1, Bleil Reading 2, Wiederholt & McNutt Reading 3, Brown Reading 4, Watson & Van Etten 2. Class discussion: Trainees compare and contrast the approaches to media/materials evaluation as stated in the readings. Trainees identify components common to each evaluation method.
2. The teacher trainee will analyze three instructional materials.	1. Reading 5, Wilson, in Hammill & Bartel 2. Class assignment: Task 1, trainees analyze three instructional materials according to Wilson's Materials Analysis format. 3. Class assignment: Task 2, trainees write a rationale based upon materials analysis data for one material, stating the reasons a material would be appropriate for exceptional learners.
3. The teacher trainee will determine pupil strengths and weaknesses in one content of skills area.	1. Reading 6, Hammill & Bartel, "Matching Materials with Student Profile". 2. Trainee gathers pupil data through formal and/or informal assessment techniques. 3. Class assignment: Task 3, utilizing available assessment data, trainee records pupil strengths and weaknesses in one content or skill area.

Student Objectives (cont.)	**Enabling Activities (cont.)**
4. The teacher trainee will select skill(s) to serve as targets for remediation.	1. Reading 6, Hammill & Bartel, "Matching Materials with Student Profile". 2. Reading 5, Wilson, in Hammill & Bartel. 3. Class assignment: Task 4, trainees arrange skills in priority order and select one as a target for remediation. Record target skill on Pupil Information Profile.
5. The teacher trainee will assess curricular-student-teacher variables.	1. Reading 5, Wilson, in Hammill & Bartel. 2. Class assignment: Task 5, trainees will analyze five instructional materials that appear to teach the target skills.
6. The teacher trainee will identify the program characteristics of an instructional material.	1. Reading 6, Hammill & Bartel, "Matching Materials with Student Profile." 2. Class assignment: Task 6, trainees complete the Materials Profile for three instructional materials designed to teach the target skill.
7. The teacher trainee will match pupil and program characteristics to select an instructional material for an exceptional learner.	1. Reading 6, Hammill & Bartel, "Matching Materials with Student Profile". 2. Class assignment: Task 7, trainees select one instructional material and plot the information on the Pupil Information Profile.
8. The teacher trainee will utilize the selected instructional media/material to teach the target skill to the exceptional learner.	1. Class assignment: Trainees, in a field-based or practicum setting, use the identified material to teach the target skill to the pupil.
9. The teacher trainee will select variables to be adapted or modified.	1. Reading 7, Lerner, "Adaptations of Materials: Instructional Situation". 2. Class assignment: Task 8, trainees complete the form, "Factors in Learning" for the exceptional learner.
10. The teacher trainee will modify or adapt one or more variables in the instructional process.	1. Reading 7, Lerner, "Adaptations of Materials: Instructional Situation". 2. Class assignment: Trainees select one or more variables to adapt/modify the teaching/learning environment. 3. Class assignment: Trainees critique modifications of other class members. Trainees suggest additional adaptations.

Student Objectives (Cont.)	Enabling Activities (Cont.)
11. The teacher trainee will implement the modification(s) and/or adaptation(s).	1. Trainees try out their adaptations with pupils.

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Evaluating Educational Materials

Gordon Bleil

The explosion of knowledge, developing instructional technology, court decisions and legislation mandating equal education for all children are pervasive forces shaping structural changes in education. A significant area of change is the role of the individual teacher. Teachers are less and less dispensers of narrow areas of knowledge, and more and more managers of materials and systems created by technicians and specialists. The skills required to discriminate among materials offered by publishers must be mastered to get value for dollars spent. This introduction to materials evaluation is intended to stimulate the educator to learn to ask the right questions before making a materials purchase.

Today's teacher is becoming more of a manager and less of a wisdom dispenser. Historically, a teacher was educated in a specific subject area and was charged with teaching others that subject. Education, like folk art, was passed from person to person. The printed page stored the facts, but teachers were the disseminators of learning. With the explosion of knowledge on all fronts, advances in learning theory, and new storage and retrieval technology, the role of the teacher is moving toward management. This trend has been accelerated in the chronic problem area of education of the handicapped by court decisions and mandatory legislation; students formerly excluded from school because the system was not equipped to educate them are now being mainstreamed into the public schools. It is in this sector, where teacher proficiency has been least developed and where technological advances have been late to arrive, that reliance on the published works and materials of others is critical.

If teachers are to carry out this expanded role as selectors of materials, they must learn how to discriminate which materials will be appropriate for the desired results. Frequently, the lament is heard, "There is so much junk in the marketplace!" The only way the "junk" will disappear is when people stop buying it. Today there are virtually no data on effectiveness or validity offered with learning materials, and none will be offered until teachers demand it and use it appropriately.

BASIC APPROACHES

Evaluation of materials can be on a subjective personal level, or we can attempt to define some objective measurable standards. In the arena of sports activities, measurable objectives have been developed carefully over a number of years to make scoring simple and fair. Such scores are possible for materials if we care about results.

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Whether the approach is subjective or objective, there are certain qualities to look for and certain pitfalls to avoid. Let's examine both.

FUNDAMENTALS

The beginning point of any useful evaluation is a clear, unambiguous statement of results you want. Before looking at any materials, your objectives should be clearly formulated. Without clear-cut goals, the likelihood of selecting correct material is poor. Pressures of time, impulse buying, and using up available dollars replace reasoned selections.

Obviously, proficiency in a subject area really pays off. Likewise, in an educational situation where teachers are assigned to new areas of responsibility, looking at materials can be a way of learning about a new subject area. *Develop a shopping plan before you go to market.* It works with the grocery list in controlling a family budget, and it will do the same when shopping for educational materials.

Comparing something against a short evaluation list and doing the same for all alternative materials is better than developing a massive screening process that you never quite get to. Whatever you do, when you compare materials to each other, evaluate them all against the same criteria and take time to do it correctly. These precautions will pay off handsomely.

Table I is a chart of the fundamentals of any teaching material. An illustration of what we mean by "correct" follows. For example, faced with teaching a course in driver education, first look at the *content* of materials to be evaluated. If these materials tell the student to drive on the left side of the road, you quickly reject them as being inappropriate for the American rules of driving. Once you determine the content is correct, check to see if the *scope* is adequate, if all the components you want to teach are included. If you believe that a knowledge of the hydraulic braking system is desirable for students in driver education, check to see if brake systems are included in these materials. Finally, you may have some preference as to where the braking system is introduced in your teaching *sequence*. You may prefer to cover that item before actually attempting to operate an automobile, or you may feel that practical experience should come first.

TABLE I. Fundamentals in teaching materials.

After determining a priori *your* objectives, screen materials for:

- **I. CORRECT**
  - **A. Content**
  - **B. Scope**
  - **C. Sequence**

  These cannot be judged in absence of prior standards and are all value judgments.
- **II. SYSTEMATIC**
  - **A. Easy to Hard**
  - **B. Teaching Strategy**
    - **1. Introduction of New Material**
    - **2. Cueing System**
    - **3. Fading System**
    - **4. Correction Procedures**
    - **5. Record Keeping**
- **III. REPITITIOUS**
  - **A. Linear or Branching**
  - **B. Developing New Proficiency**
  - **C. Maintaining Old Skills**

The basic question is, "Do the materials fit your needs?" In looking at materials, remember that there are virtually no absolute standards of correctness for content, scope, and sequence. This is why it is so important to begin with a clear and unambiguous statement of your own objectives so that you have a standard against which you can measure other materials.

SUBJECTIVE EVALUATION

As mentioned, evaluating materials can be divided into two steps: "look for" and "look out for."

Subjective considerations always have a place in evaluation. But the biggest trap in subjective decision-making is to find yourself in a position of saying "I like it," or "I don't like it" without being able to identify components or elements that create the attitude. Learn to look past this emotional response and into the "why's" behind it.

The reason for this is obvious. Not unlike any other producer of goods, publishers are masters of marketing. Style, feel, taste, and design all influence purchasing decisions. And each of us is too well aware of the many things we have bought that "looked good, worked bad!"

Many materials sell well because of attractive packaging and merchandising; they appear entertaining or effective to those who make buying decisions. Do not confuse being entertained by a publisher with results for your students. Every publisher knows students do not make buying decisions. Materials are marketed for teacher appeal, not student performance.

Another problem with subjective evaluation is no two materials are identical. It is hard to structure a system for choosing "apples" versus "pears." Again, it really depends on what you expect to accomplish.

In looking at materials subjectively, we take an existing bias, usually developed over a long period of time, and apply it to a current situation. The preference may be personal, or it may be the preference of another.

Our self-values and biases are limited by our exposure and experience. None of us can know all about everything, so we draw from a limited resource bank when we restrict subjective appraisal to our personal views.

Therefore, most of us tend to look for secondary levels of bias — for those of others we respect. (If my neighbor's lawn is greener than mine, I am likely to ask his advice on selecting fertilizer.)

It is natural and appropriate to rely on the bias of others. The question to ask is whether their particular bias and expertise is germane to the current situation. Their vantage point must be similar to ours if we are going to rely on their judgment. Many people look to authority figures for recommendations in a field where they themselves are not an authority. But remember that others' biases are *also* limited by their opportunities to form judgments. And, if they have not been exposed to problems like yours, their judgment may be inaccurate.

Unfortunately for buyers, the educational sector is characterized by a lack of accessibility to others' biases. Consider automotive magazines, hobby and craft magazines, and periodicals like *Consumer's Report* which give buyers everywhere an opportunity to share in someone else's evaluation with the added advantage that the writers tell how they formed their judgments. This doesn't mean you have to buy their answer — but it gives you a way to think about their evaluation approach and then look to your own needs. It is easier to learn how to shop for a pop-up toaster than it is for a reading lab.

What are some of the "watch-out-fors?"

(1) *Magic solutions.* The use of superlative adjectives is an immediate flag. Ask a publisher if he will guarantee results with your students, or if he has substantiations of the claims made in superlative terms. Breakthroughs in education are slow in coming and are usually the result of thorough, painstaking work.

(2) *Diagnostic labels.* Labels may or may *not* indicate students for whom materials are appropriate. A program designed for the deaf is likely to be useful with those who are deaf because the word "deaf" indicates an understandable condition with which we must cope. Other popular labels suggest students have problems but do not tell us what to do about those problems. Frequently materials are marketed to a sector by labels such as "emotionally disturbed," or "learning disabled." Vendors know there are many seeking help in these areas. By labeling their materials as the educators have labeled the students, publishers imply that the materials were developed for that special audience. Putting a diagnostic label on materials is a marketing strategy. Ask for substantiation.

(3) *Fad words or phrases.* Jargon such as "high interest, low vocabulary" develops in every field of human endeavor. If used as a convenient shorthand to facilitate understanding, it can be useful. But jargon can be popularized and serve the same purpose for a marketer as do diagnostic labels. It implies a fit of materials to a need that may or may not be accurate. If all of the teachers are looking for "wiggits" and your materials are labeled "wiggits," they are likely to be purchased. What is really connoted by widely used phrases? What does "high interest, low vocabulary" really mean? High interest — for whom? Under what circumstances? Can you measure it? Or, is it just a phrase? Be specific, not glib.

(4) *Grade levels.* With social promotion, lack of uniform standards and high mobility of teacher and student populations, grade levels are very deceptive. This is a structure label

instead of a student label and has the same hazard. How is that level determined? If a marketing manager thinks a new material looks good for third graders, he may well just print "Third Grade" on the cover based on his own bias. Find out who picked the level and whether you can rely on it. This is particularly important in dealing with students who already have problems. A misfit of materials may compound your problem.

Now that we have explored some of the negative implications and the pitfalls of materials, what are some of the positive signs? Bear in mind that each of these positive signs can become a "watch-out-for" if they are missing.

(1) *Common sense.* If something is simple, logical, clear, and explicit and squares with your life experience and common sense, it's worth looking at in greater depth. Something that goes against the grain and just doesn't seem right initially, suggests that the developer/publisher hasn't done his homework. We tend to like things that square with our instinctive values.

(2) *Honesty.* Working with handicapped or exceptional students, it is unlikely that their problems will magically disappear or suddenly be cured. When permanent solutions are found to a problem, (like the discovery of a vaccine for polio) we can shift our emphasis. Such ultimate solutions are well publicized and everybody takes advantage of them. Meanwhile, look for realistic statements.

(3) *Management.* Do materials squarely face the fundamentals of classroom life?

(4) *Editorial control.* Some publishing firms maintain extremely high editorial quality control, and you can rely on their screening and integrity to bring you a quality product. Other publishing houses only merge ink and paper and make no such effort to screen their materials. What is your previous experience with a given publisher?

(5) *Authorship.* A Ph.D. suggests expertise. But blind reliance on the title of an authority is foolhardy. You have every right to look behind labels and to find out meanings. Look for lucid statements of rationale and background on materials which you are evaluating. A new, unknown author who has been thorough and diligent may produce a better quality product than a seasoned author who is trading on his reputation. Consistent success or reputation is an important factor, but last year's "best seller" is no guarantee that new work is up to the same standard.

(6) *Success.* Specific information from other users in similar circumstances is perhaps the best subjective evaluation you can have. But again, this bias is useful only if it parallels your situation.

Let's now turn to some of the more objective considerations related to materials evaluation even though both overlap somewhat.

OBJECTIVE EVALUATION

Objective evaluation is essentially a series of discriminations of observable and measurable factors.

Start with a list of your desired goals by categories and identify critical items those which must be present for you to consider the materials at all. Other items may be optional depending on the particular situation, problem, or use, and you can safely eliminate questions that do not concern the purpose at hand. Do a gross sorting first for obvious "knock-out" factors.

Questions for objective evaluation are best if they can be answered with a simple "yes" or "no" response. It takes longer to develop a questionnaire for this kind of answer, but it is easier to administer and will give more consistent results.

Avoid questions which require an unstated prior knowledge or which presuppose some bias or standard that is not explicit within the question.

Ambiguous questions give ambiguous answers. Terms like "adequate," "appropriate," "theoretically sound," and "rigid" are all subject to the vagaries of personal bias and interpretation and should be avoided.

If extra features or benefits are being sold by the publisher, each should be subjected to a "so what?" test, instead of being accepted as dogma. What would the implication be if that feature or benefit were left out? Would it affect the student's performance?

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The following questions are meant as guidelines for developing your own specific appraisal tools:

(A) TEACHER NEEDS
- (1) Are teacher prerequisites specified?
  - (a) What skills are required of the teacher?
  - (b) What attitudes are required of the teacher?
  - (c) Is lesson preparation time required of the teacher?
- (2) Is a presentation mode specified?
  - (a) Is it a standard mode?
  - (b) Is it a special format?
  - (c) Do you have the facilities to utilize this mode?
- (3) Is there a lesson assignment sequence?
- (4) Are evaluation procedures for teachers to observe student performance specified in exact comprehensible terms?
- (5) Are directions for teaching the skills and concepts clearly specified and understandable to you?
- (6) Is a teaching strategy specified?
  - (a) Is form of presentation specified?
  - (b) Are correction procedures specified?
  - (c) Are review procedures specified?
  - (d) Are management techniques specified?
  - (e) Are supplemental aids specified?
- (7) Are there suggestions for storage and retrieval of materials?
- (8) How much preparation time is required to use materials?
  - (a) How much time is required initially to obtain first-time proficiency?
  - (b) How much time is required daily?
  - (c) Is onsite in-service available?
  - (d) Is in-service required away from the premises?
- (9) Is an answer key provided?
- (10) Is the answer key of a simplistic nature that students can memorize?
- (11) What is the teacher/student ratio for use of materials?
- (12) How much time per day or per week must be devoted for materials to be effective?
- (13) How much time per day or per week can you devote to the materials?

(B) STUDENT NEEDS
- (1) Are behavioral objectives for the student specified?
- (2) Are prerequisite task skills for the student specified in a hierachical order?
  - (a) Are mental skills specified for the student?
  - (b) Are physical skills specified for the student?
  - (c) Are prerequisites realistic for you? (For example, we all know that one-to-one tutoring works, but if you cannot do one-to-one teaching this becomes an unrealistic prerequisite.)
- (3) Is student response mode specified?
- (4) Is response mode appropriate for the student?
- (5) Is there a simple procedure for verifying correct response?
- (6) Is there a simple procedure for detecting errors in response? (Many programs permit a student to make an error and still continue in the material.)
- (7) Are correction procedures specified when a student makes an error?
- (8) Is criteria by which mastery is measured specified?
- (9) Is there a strategy specified for the student to follow if criteria is not met?
- (10) Is there a measure of student progress that doubles as a motivation tool for the student?
- (11) Can the student keep track of his own progress?
- (12) Is the recordkeeping procedure useful to both the teacher and the student?
- (13) Are there suggested follow-up materials?

(14) Is the material part of an integrated curriculum that is specified?

(C) GENERAL NEEDS

(1) What is the price of the program?

(2) Is the program material consumable? (Or, what percentage is consumable?)

(3) What is the price of consumable materials?

(4) Can nonconsumable components be replaced separately?

(5) If the presentation mode is mechanical or electronic, is repair service available?

(6) Where is the nearest repair service?

(7) Will the vendor provide replacement equipment while mechanical or electronic equipment is being repaired?

(8) Is a scope and sequence chart included?

(9) Can materials be shared with other teachers?

(10) Is materials part of an expanding system that can be added to?

(11) Is there a separate teacher's guide? Is it available separately?

(12) What warranties are there?
  (a) Performance warranty?
  (b) Serviceability warranty?

(13) Are materials targets for theft or other risks?

(14) Are materials durable?

This list should be a point of departure for your own version.

VALIDATION

Validation can be a vague area which may provoke vigorous dissention. However, design of evaluation instruments is critical. If the information yield of the validation tools is irrelevant, it is a waste of time. When validation information is offered, the fitness of questions for the instrument evaluated should be analyzed. What was measured may determine the usefulness of the answer. There is an often reported anecdote of the lawyer who claimed he had never lost a case after 20 years of practice. On closer questioning, his friends discovered that many of his clients had not fared too well, but that he had always been paid.

Conclusions can be made to fit almost any set of data. Yet too little data are available, and they are often poorly used. What this author refers to as "flea logic" derives from the story of a professor who trained a flea to jump over his finger on command. When, after systematically removing the flea's legs one at a time the flea failed to respond to the command "jump," our professor reasoned, "if you pull all the legs off a flea, it goes deaf!"

Validation involves two separate distinct components: Student performance and teacher instructions. For commercially available programs, it is probably more important that teacher performance has been independently tested. Frequently authors and clinicians report on student performance, but those materials do not give similar results when transferred to different settings or are used by different people. This is a problem of replication and is central to scientific methodology. Ask for both student and teacher performance criteria.

In looking at validation, bear in mind that different categories of materials demand different evaluation levels. It is helpful to sort your materials into at least four sets: (1) instructional materials, (2) drill and practice materials, (3) test materials, and (4) free time activities, fun and games.

Producers and publishers are well aware of the difficulty of structuring materials based on use. Ask if the intent of the material is the same as your intent. Each higher level of material on this list requires a higher level of validation. Is the material designed: (1) to inform? (2) to entertain? (3) to sell? (4) to teach?

Material designed to simply inform should not be eliminated because it fails the rigors of "teaching" evaluation. Correct use of materials is the user's responsibility, if clear directions are provided by the publisher.

ABOUT COST/PRICE/VALUE

The most expensive materials you will ever buy are those which don't work. Unfortunately the field of education lacks a system of comparative cost analysis. Such an analysis is vastly different from absolute price comparisons.

Teachers and other purchasers of materials are under pressure to make their dollars go as far as possible. But to compare costs it is necessary to have a system by which you can compare results. (Accountability is the word used to describe this process and terrifies those who have not been trained in its simple application.) When you are comparing results, included in the analysis is the price of all of the elements going to that end result — materials, space, salaries, and time.

For example, for a city engineering department a $40,000 bulldozer is likely to be a better buy for moving gravel than 10,000 rakes at $4 apiece. You get a lot more rakes initially, but if we measure results from equal expenditures over a time period, the bulldozer probably wins. (If there is no gas, or labor is free as in a prison chain gang, the bulldozer may lose!)

Incidentally, in education, it is a paradox that thousands of dollars can be spent for salaries to invent something which could be purchased off the shelf for $100. This is an accounting and structural problem that is outside the control of most buyers.

The real question then for buyers is, "What is my price per unit of results?" Since there are only two cost elements in control of the purchaser of materials, both should be observed: units of time invested and units of money invested. Then you can look at tradeoffs, in terms of which are more scarce and valuable.

SOME OTHER VARIABLES

No discussion of the evaluation of materials would be complete without commentary on the role of purchasing committees. Everything we have said about objective and subjective appraisals applies to evaluation done by committees. Such a group is either composed of a team of experts who complement each others' skills, or a number of people with similar skills. All too often the latter group is an escape valve for individual responsibility. The political expedience of a collective subjective evaluation leads to the lowest common denominator which will offend no one and dignifies collective ignorance.

Ideally, a committee composed of complementary individuals can develop the evaluation criteria, and then clerical staff can screen materials to fit standards.

If you are working individually, make your own list. After you have made a list, use it several times to make a purchase decision. Then revise it.

As you revise it, look back and reassess the checklist you used, comparing your initial appraisal with the much greater knowledge you have now that you have purchased and used material. How accurate were you? What things did you overlook? What things do you want to be sure to look for or look out for the next time?

Reading consumer product reports and evaluations in magazines can help to develop your own individual system of materials appraisal.

CONCLUSION

As Walt Kelly's incredible Pogo once observed, "We have met the enemy, and he is us." My comments about publishers are not meant to imply a blanket indictment of the industry. The vast majority are responsible, concerned, and conscientious firms. Most welcome specific criteria to plan their own efforts. But, it is all too human to take the path of least resistance. A publisher is a marketer and is geared to sensing the realities of buyers needs and meeting those needs. If educators do not care about accountablity, it is naive to think that publishers will, or should, care either.

As more educational buyers base their selection on accountability standards, that is what publishers will offer the market. However, I am unaware of a single approval committee, at any state or district level, that has ever provided a publisher with a simple standards list such as the one set forth in this article. As a result, good materials frequently are not even submitted for evaluation because the rules by which the game is to be played are not clear. It is the educator and the student who lose in this kind of system.

The key to all appraisal is a two-step process.

To get a better return from the dollars you spend, (1) ask the right questions, and (2) be prepared to use the answers.

Finally, in selecting structured program materials ask that most important question of all, "Am I willing to use the materials in the manner in which they were prepared?" If you are not willing to do this, the results will be different just as changing the ingredients in a cooking recipe leads to a different end product. It is your self-appraisal of your own willingness to cooperate that is the real secret to success in using materials. — *Edmark Associates, 13249 Northup Way, Bellevue, Washington 98005.*

ACKNOWLEDGMENTS

The author is grateful to those from whose efforts he has drawn freely. Tina Rosen, formerly curriculum programmer for Franklin-Pierce School District, Tacoma, Washington, has worked diligently to develop a checklist based on classroom data. Many questions from her efforts are included in the objective list. Cecilia T. Harper, whose works are exemplary and too little known, and Stephen Sulzbacher, who encouraged me to take the time to share these thoughts with others, both deserve extensive credit.

Evaluating Materials for Handicapped Adolescents

J. Lee Wiederholt, EdD, and Gaye McNutt

Selecting the most appropriate educational materials for young children with learning disabilities requires a great deal of time and expertise. Perhaps, it is even more difficult to choose materials for handicapped adolescents because so few suitable guidelines and criteria for selecting appropriate materials at this age level exist. A record factor is that little or no research is available on the effectiveness of specific materials for the young adult group.

To assist teachers in choosing materials for their handicapped adolescent students, we propose a comprehensive evaluation method which consists of two phases: (a) "static" and (b) "dynamic." The purpose of a static evaluation is to obtain information that will be used to decide which of several programs or materials to purchase and/or implement. The results of dynamic evaluation are useful in deciding whether a material that currently is being used should be altered or discontinued. These two phases of total evaluation are discussed more fully in the following sections of this article.

STATIC EVALUATION

A static evaluation utilizes a set of predetermined guidelines to analyze educational materials systematically. This evaluation is undertaken before a program is implemented with students for the purpose of selecting the material(s) which could most appropriately be used with particular students. This type of evaluation also may help identify modifications or adaptations which must be made prior to employing the materials with students. In this section, we present an overview of existing guidelines which, with a few modifications, might appropriately be used for static evaluation. We also will discuss factors which should be considered as critical when conducting static evaluation of materials to be used with adolescents.

CURRENTLY AVAILABLE GUIDELINES

No specific guidelines for evaluating special education materials at the secondary level were located. Several available guidelines appear to be designed mainly for use in evaluating *elementary* rather than *secondary* level special education materials. Others we found were not designed specifically for evaluating special education materials but were intended to be used for evaluating secondary *regular* education materials. However, a few guidelines were found which can be adapted for our purpose.

Elementary special education guidelines. In this section, four guidelines developed by various authors for evaluating materials designed for elementary-aged handicapped children are discussed. With certain modifications, these may also be useful when evaluating materials for older special education students.

The first set of guidelines reviewed are those developed by Bleil (1975). He divides the evaluation of materials into three separate stages. In the first stage, teachers should have clearly in mind the objectives they wish to achieve with students. These objectives then should be compared to the fundamentals of the materials (e.g., content, level of difficulty, record keeping). During the next step, Bleil encourages teachers to look past their emotional reactions and to consider the reasoning behind certain aspects presented in the materials. To aid in this process, he includes descriptions of various publishing "gimmicks" (e.g., the use of fad words or phrases, the deceptiveness of grade levels, etc.).

The final major step is an objective evaluation based on three components: (a) teacher needs (e.g., How much preparation time is required? Is a teaching strategy specified?); (b) student needs (e.g., Are behavioral objectives for the student specified? Criteria by which mastery is measured?); and (c) general needs which include factors such as cost and durability. Bleil stresses the need for an objective evaluation form which requires yes/no answers or short, unambiguous replies.

Brown (1975) presented a thorough Q-sheet, or question sheet, consisting of 31 questions and a number of subquestions which assist in the evaluation, comparison, and selection of materials. Each query is followed by a brief description to help the teacher apply the question and determine the answer. An example of this question and explanation format is:

> *What is the scope of the program?* Scope is the comprehensiveness or the breadth of the program. It determines how much of what it is possible to teach has been included in the program at hand. A program of limited scope may be desirable for teaching a specific skill, or as a supplement to an existing program which is weak in a particular area or variable. [p. 412]

While certain of the questions suggested by Brown allow for yes/no answers, most require rather comprehensive and detailed answers.

Eash (1974) proposed an evaluation form which is similar to a checklist in that the teacher checks yes/no or circles rating scales for most elements of the form. Detailed descriptions for interpreting the ratings of each scale are included. The four major areas of Eash's evaluation are (a) program objectives, (b) organization of the material, (c) methodology, and (d) evaluation procedures included in the material. A unique addition to this form is the inclusion of a glossary of terms used in the instrument.

Watson and Van Etten (1976) offered a Materials Evaluation Form which contains 16 major components focusing on topics such as learner characteristics, materials format, and teacher involvement required. Two components included in this form often are omitted in other sets of guidelines. These are: (a) How is the student informed of his or her progress? and (b) What is the "efficiency quotient" of the material? This latter component is designed to determine if the cost of the material is reasonable in terms of the benefit students get from using it.

Because each of the previously summarized guidelines appears to be designed primarily for evaluation of elementary level materials, none would be totally satisfactory for evaluating secondary level materials without certain modifications. Each, however, contains specific criteria which may be useful when evaluating materials for adolescents. Consequently, teachers are encouraged to analyze these guidelines carefully and select items which appear critical to their specific situation.

Secondary regular education evaluation guidelines. Guidelines for evaluating secondary regular education materials generally are not as comprehensive as those just reviewed. However, guidelines at the secondary level are useful for evaluating some subject materials as well as allowing educators and/or students to assess the total effectiveness of a program or course. We believe one of the more useful secondary guidelines is the Florida State Department of Education's *Criteria for Instructional Materials Selection* (1975). It contains both general criteria, applicable to all subject areas at the secondary level, and specific criteria which apply to particular subject areas. The general criteria direct the teacher to consider such topics as the suitability of the vocabulary, sentence and para-

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graph structure, and concept levels of the materials. Specific criteria presented are for analyzing literature, reading, and mathematics materials.

With slight modifications, a form presented by Aaron, Callaway, and Olson (1965) may be useful in evaluating materials for handicapped adolescents. The focus of this form is on determining whether a text has an appropriate level of reading difficulty, whether adequate attention is given to vocabulary and concept development, and so forth. Aaron et al. also provide methods for surveying (a) instructional practices in basal reading classes, (b) teacher beliefs and practices related to teaching reading, (c) the use of reading materials, and (d) the total reading program (e.g., evaluation of materials, equipment, and practices).

While each of these static evaluation guidelines is useful in certain situations, none is specifically directed at evaluating materials used with handicapped adolescents. Because the needs of special education students at the secondary level are so varied, a number of different types of evaluation forms may be needed. For example, evaluation of career education materials, a social studies curriculum, and a social adaptability program all would require very different forms.

DEVELOPING A SET OF GUIDELINES FOR STATIC EVALUATION

Various factors from existing guidelines may be included in developing a specific set of guidelines to evaluate materials for handicapped adolescents, depending on the particular students and the situation. Additionally, however, it is critical to consider the (a) relevance of the material to the students' needs, (b) readability levels of the printed materials, (c) language of the materials, (d) prerequisites, and (e) motivation. While certain authors of the previously mentioned guidelines include aspects of these five elements, an in-depth perspective is needed when evaluating materials for handicapped adolescents. A brief guide to examining each of these elements follows:

Relevance. The two factors related to the concept of relevance that a teacher should consider when conducting a static evaluation are: (1) identifying objectives which have practical applicability to the present and/or future needs of the students and (2) determining the students' understanding of the importance of these objectives and the materials.

The relevance factor relates to identifying objectives which have practical applicability to the present and/or future needs of adolescents. Since many handicapped students will not attend postsecondary schools, consideration should be given to providing the students with skills necessary for successful functioning in society once they leave school. While there are many such skills, various authors have presented specific categories which are of particular relevance. For example, Brolin (1976) suggested that these skills relate to three basic areas:

(1) Daily living skills: The nine basic competencies listed include managing family finances and taking care of personal needs.

(2) Personal-social skills: Examples of the seven basic competencies for this area include the ability to make sound decisions and communicating appropriately with others.

(3) Occupational guidance and preparation skills: This area contains six basic competencies. Examples are the selection of the most appropriate occupational choice(s) and developing the necessary expertise.

Readers interested in identifying competencies needed for successful functioning in society are also referred to the results of the Adult Performance Level (APL) project (Northcutt 1975, 1976). The staff of this research-based project has identified five basic knowledge areas: consumer economics, occupational knowledge, community resources, health, and government and law. The project staff then identified 65 APL objectives related to these five areas, and a scope and sequence chart was developed for each objective (Northcutt 1976).

Both the APL information and Brolin's work focus on skills needed once a student leaves school. If teachers are interested in identifying relevant objectives for students who will not attend postsecondary schools, either or both of these references may be helpful.

In some cases, handicapped students may plan to attend a postsecondary school and/or work toward fulfilling secondary school equivalency requirements. In these instances, the material selected may not be one that teaches "functional" skills but rather, one that aids the student in reaching a particular goal (e.g., the student may need materials that teach certain science concepts in order to receive the needed credit units for a high school diploma). Such material may be relevant for the student even if it does not teach a skill immediately useful for future living.

The second aspect of relevance focuses on whether or not the students will be able to understand the importance of the objectives and the reason for using the materials. By the time students reach adolescence, many – if not most – are interested in how their educational programs can relate directly to their lives. Carnes (1972) stated that two of the more common characteristics of dropouts are lack of interest in school, and a belief that the courses are not relevant to their needs. If the purpose of the material is not obvious to the students, the teacher should consider clarifying the relevance in a discussion with the students.

Readability level. First, what is the readability level of the materials the students will use, and is it within their capability? Second, if the reading level is not appropriate for certain students, can the materials be modified?

If portions of the materials will need to be read by the students, the teacher should consider the readability level. Formulas for deriving readability (e.g., 4.0 reading level) predict the grade level of reading achievement which is needed for success with the particular material. The term "success" usually refers to a percentage of correctly identified words and correctly answered comprehension questions. Because the levels of correctness for word recognition and comprehension may vary according to the formula used, the grade levels also may vary. One of the easier-to-apply readability formulas is the SMOG formula (McLaughlin 1969) which is based on expecting 90 to 100% accuracy in comprehension. Most other formulas are based on 50 to 75% accuracy. Another dependable way to determine whether a material is suitable for individual students is to apply the cloze procedure. In the application of this formula, every *n*th word (stipulated by user) is omitted from a passage. If the student can supply about 45% of the missing words, the material is considered to be at his or her instructional level (Miller 1973). Teachers who apply only one formula to all materials are more likely to have consistent estimates of readability levels.

Caution should be used even when the publisher states a reading level for particular materials. Lavely, Lowe, and Follman (1975) investigated the stated reading level of 57 instructional materials used with educable mentally retarded adolescents. These authors concluded that the reading levels given by the publishers or authors generally were inaccurate and inconsistent. Teachers should exercise caution when deciding whether to accept reading levels stated in published materials.

The second factor of readability concerns the modification of those portions of the materials which require reading that may be too difficult for particular students. For example, if the reading level within a mathematics kit is extremely difficult but the math content is what the student needs, consider the possibility of adapting the reading portion of the material. The teacher might tape the difficult reading materials or assign a student "buddy" who is more proficient in reading. Occasionally a publisher will provide ready-made alternatives. Some produce two sets of materials which are essentially the same except for reading level. For example, New Readers Press publishes a weekly newspaper, *News for You*, which presents the same news, but at two levels of reading difficulty.

Language of the material. When choosing materials, secondary-level educators need to consider the appropriateness of language within the material. The language may be composed of vocabulary and sentences that are either too complex or too simple for particular students. The background and concept development of the students must be matched with the language of the program. For example, the *Hip Reader* program, with a stated reading level from 0 to 4.0, uses "street language." This may be appropriate or totally incomprehensible to students who are reading at one of these grade levels, depending on their background and the language ~~they use~~ in everyday life.

Prerequisites. All evaluation forms should include a component which asks if the material being evaluated has stated prerequisites. At the secondary level, teachers often assume that their students have the prerequisites necessary for the particular materials, whether the prerequisites are academic in nature or related to the students' experiential background. Defining prerequisites becomes increasingly more difficult and, at the same time, more important with older students. There are three general types of prerequisites to consider:

(1) Academic skills directly related to the material: the actual objectives of the material and the prerequisites needed by the student before beginning the material. For example, if the material is a science program, what are the factual science prerequisites, and does the student know them?

(2) Academic skills not directly related to the program: This factor considers academic skills which are not directly related to the objectives of the program, but necessary for success. With the science program just mentioned, a variety of reading and/or math skills might be required.

(3) Experiential background: In rather simplistic terms, it should be determined if the students have had sufficient experiences to relate their world to that represented in the material. The experiences the students have had may be real or vicarious, but they should have sufficient understanding to comprehend the material. For example, if the material presents inner city life, would rural students have sufficient background to understand the material?

Motivation. While few secondary level materials attend to motivation, it may be one of the most important variables in determining whether or not an adolescent will succeed. Since most materials do not specifically deal with motivating students, the teacher needs to carefully consider how she or he will be able to foster motivation and how self-motivating the materials may be for particular students. Basically, motivation refers to whether or not the material(s) will increase the students' desire to learn the subject matter as well as their desire to work with the particular material. Besides considering the relevance of the material (previously discussed), it is critical for the teacher to look at the type of reinforcement which is suggested and/or indicated. As students mature and become more sophisticated, it becomes increasingly important to identify the most appropriate and effective means for reinforcing each student. Once the type of reinforcement for a particular student is identified, the teacher must then determine how to use it with particular materials.

There are also variables within the material that may increase or decrease student interest such as content, manner of presentation, and types of illustrations. For example, materials that are usually labeled "juvenile" by adolescents have little chance of increasing interest. Attention to these factors becomes critical when selecting materials for adolescents.

SUMMARY OF STATIC EVALUATION

In this section, various guidelines for the static evaluation of materials have been reviewed. None were designed specifically for evaluating materials used with handicapped adolescents. When evaluating such materials (i.e., those to be used with handicapped adolescents), we believe the teacher should incorporate components from various guidelines as well as including the five critical factors just discussed. The previous discussion lays out the key variables that a teacher needs to consider on an individual basis to judge their relevance to his or her students and situation.

DYNAMIC EVALUATION

As noted, static evaluation techniques are used when a teacher is deciding which set of materials to purchase and use. Once this has been accomplished, dynamic evaluation techniques are employed to judge the success of the materials in facilitating student learning or to determine needed modifications. Four techniques that we believe useful for conducting a dynamic evaluation are: (a) pre/post testing, (b) analytic teaching, (c) observation, and (d) interviewing. A brief explanation of each of these techniques follows.

PRE/POST TESTING

Increasingly, teachers have begun to focus more specifically upon measuring the handicapped student's progress over a period of time. This trend is likely to increase with the implementation of Public Law 94-142 (Education for All Handicapped Children Act of 1975). This law mandates periodic evaluation to assure that the student is profiting from the instructional program. Since the success of the instructional program relies heavily upon the appropriate selection and use of materials, teachers must evaluate carefully the efficacy of materials as used by handicapped adolescents.

Pre/post testing involves the administration of a test prior to implementing a program and re-testing the student after the program has been completed. In the past, teachers often employed norm-referenced tests for this assessment. Norm-referenced tests were assumed to have been built upon rigorous statistical data. Theoretically, items on these tests are selected carefully. Administration and scoring procedures are specific, reliability and validity are to be demonstrated, and ample normative data are to be provided. Information derived from these norm-referenced tests is of a highly quantitative nature, i.e., reported in scaled scores, grade equivalents, or percentiles. Consequently, teachers and administrators often felt comfortable with these "objective" data on a student's progress.

Unfortunately, many norm-referenced tests are poorly constructed and therefore are not as "objective" a measure as desired. In addition, many professionals now believe that these tests are inadequate and incomplete measures of an individual student's progress (Garrett 1965, Gronlund 1971). For the most part, these tests provide only a limited sampling of the student's learning. Few norm-referenced devices include sufficient items to determine specifically what the student has accomplished over time. For example, if a reading word-recognition test has been normed, only five to ten words may be selected for use at each grade level. If an opportunity has not been given to the student to learn these selected words, it is likely that she or he will perform poorly on that particular test.

There are, of course, legitimate reasons for using norm-referenced tests when measuring student progress. In most cases, they can be employed appropriately to evaluate the overall success of a program for a large group of students or to compare an individual's relative standing on general performance areas to a larger population. However, these tests rarely can be used effectively when the teacher is seeking information upon which to plan, modify, or evaluate the use of a set of materials with an individual student.

In order to circumvent the weaknesses of norm-referenced tests, many professionals now use criterion-referenced measures for pre/post testing. In regard to evaluating materials, criterion-referenced testing is done in order to judge the student's acquisition of the specific information or skills purported to be covered by the materials. For example, if a particular material is used to develop word recognition, the teacher would pre/post test the pupil on the specific words being taught. In this manner, a clear picture of student progress with a particular material can be obtained. If limited progress is being made, changes or modifications in the materials or other variables may be needed until the student's achievement is viewed as being adequate.

More complete coverage of pre/post testing can be found in Drew, Freston, and Logan (1972), Gorth and Hambleton (1972), Proger and Mann (1973), and Meskaukas (1976). We highly recommend the criterion-referenced approach as one viable means for undertaking a dynamic evaluation of a student's progress in a set of materials.

ANALYTIC TEACHING

A second technique useful in dynamic evaluation is that of analytic teaching. Analytic teaching refers to those methods which allow the teacher to analyze a student's behavior while engaged in instructional situations. When this technique is applied to the evaluation of materials, the teacher is interested primarily in how the program facilitates a student's learning. If the student's reactions are not in agreement with the objectives of the material, analytic teaching provides a framework for determining how the program may be changed, modified, and/or improved when used with this particular student or group of students.

Various analytic methods may be adapted for use in a dynamic evaluation of the interaction of student(s) with a set of materials. Wiederholt, Hammill, and Brown (in press) have noted three characteristics which are common to these various methods: (a) the students must be systematically observed using the materials, (b) the student's responses must be recorded and analyzed according to some specified frame of reference, and (c) the interpretation of these results should affect the future use of the materials. They further stated:

> Methods that specify few requirements relative to the manner in which the procedures are to be executed and which suggest no particular system for recording student performance are called "Diagnostic Teaching" methodologies. Methods that have highly specific, standardized procedures and detailed, precise means of measurement are called "Applied Behavior Analysis" methodologies.

Lovitt (1975a, b) has described the rationale for Applied Behavior Analysis (ABA) and its application to curriculum research. Other authors who described forms of ABA include Hall (1972) who proposed a "Responsive Teaching" model and Kunzelman (1970) who presented the "Precision Teaching" model. Authors who have discussed diagnostic teaching include Johnson and Myklebust (1967), Laurendeau and Pinard (1970), and Peters (1965).

In a dynamic evaluation, the teacher will want to apply one of the various analytic teaching procedures over a period of time. Of particular interest during several instructional sessions will be the student's (a) understanding of either verbal or written directions prior to undertaking a task, (b) perception of the significance of the lessons, (c) need for additional instruction prior to beginning the program or any section thereof, (d) performance when positive reinforcement is built into each activity, and (e) need for periodic modifications in the format of instructional units in order to keep the lessons interesting and appealing over time. The information gleaned from this type of analysis gives the teacher an objective basis on which to modify a specific program when used with a particular student or group of students.

OBSERVATION

Simply stated, observation is the viewing and interpreting of a student's behavior while engaged in using a particular instructional material. Like analytic teaching, observation can be done very informally or can be undertaken following a quite rigorous format. In the informal situation, the teacher will merely note the student's behaviors as they occur. In these instances, the teacher usually records the behaviors during instruction and then, at a later time, interprets what these behaviors mean in terms of modifying the instructional material. The modified material then is used with the students, and the teacher records behaviors again. This process is repeated until the program appears to be modified successfully for an individual student or group of students.

Wright (1960), Hall (1971), and Cooper (1974) have discussed more structured and formal approaches to observation. Bijou, Peterson, and Ault (1968) presented a method for using both the informal and formal approaches to observation. Essentially, these latter authors recommend four steps in observation:

(1) Defining the situation: This should include a description of both the physical and social setting.

(2) Specifying the behavioral and stimulus events in observable terms: This step also includes the determination of the methods and/or instruments for collecting the data.

(3) Measuring and determining observer reliability: This step often includes training for the observer(s) in the particular procedures to be utilized.

(4) Collecting, analyzing, and interpreting the data.

The data derived from observation are not unlike the data that are accumulated through the less rigorous forms of analytic teaching. Observation does, however, provide the teacher with another format for undertaking a dynamic evaluation of a set of materials. Data derived from this approach can be valuable in modifying a material or related factors based upon actual problems a student is encountering in learning.

INTERVIEWS

The interview approach involves discussing with the students their perceptions of the materials they are using. These interviews can be done while the students are working actively on the material or after they have completed several lessons. Teachers who use the interview approach in a dynamic evaluation of a program should have a clear picture of the information they are seeking. Prior to undertaking an interview, it is wise for the teacher to prepare a list of questions which are viewed as relevant. Such matters as the student's understanding of and interest in the materials need to be included. The teacher might also find the "wh" questions particularly helpful, i.e., who, what, where, when, and why. It should be noted that interviewing is more than just conversation. Books such as *Interviewing: Principles and Practices* (Stewart & Cash 1974) and *Interviewing: Strategy, Techniques, and Tactics* (Gorden 1969) would be helpful to those unfamiliar with this approach. The chapter by Morse (1971) would also be helpful.

Finally, this interviewing approach can be used by professionals who recommend programs to teachers. A follow-up interview with the teacher on how a particular piece of material can be improved likely will benefit both the person being interviewed as well as the interviewer. Such an approach might result in the teacher reflecting more carefully on the implementation of the material. The interviewer also might obtain some valuable tips on how given material can be modified. When the interviewer recommends the material to others, she or he then can pass on the ideas for modification.

By employing pre/post testing, analytic teaching, observation, and/or interviewing techniques, the teacher can glean valuable information regarding the need for changes or modifications in a set of materials for particular students. These types of dynamic evaluation also help assure that the handicapped adolescent is receiving optimal benefit from his or her instructional program.

SUMMARY AND CONCLUSION

In this article, we have attempted a brief overview of various static and dynamic approaches that can be used to evaluate instructional materials for the handicapped adolescent. We hope that this general framework will provide secondary special educators with the necessary information from which they can develop their own personal evaluation program. This evaluation program should be based on teacher and student needs as well as the confines of the situation in which they operate. Teacher needs include such matters as the type of material the special educator feels is most critical – a remedial reading program, a management system, etc. Student needs comprise such matters as the interest, motivation, relevance, and language of the material. The confines of the situation deal with budget, time, and type of service arrangement in which the teacher and adolescent function.

We recognize that considerable expertise and knowledge are needed to develop an individually tailored evaluation approach. It also takes time to complete both static and dynamic evaluations of instructional materials. Unfortunately, however, there are few shortcuts to defensible professional practices. Evaluation, both static and dynamic, must be the final product of the lesson plan.

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A Basic Q-Sheet for Analyzing and Comparing Curriculum Materials and Proposals

The current availability of many special education materials and curriculum programs is considered by some as indicative of the increasing sophistication of the field. To others it is evidence of a bag-of-tricks approach to most difficult instructional problems. At the present time there is no objective way of determining where along a "trick/treat" continuum a material or program might be ranked. The evaluation of quality still tends to be largely judgmental, based on either user opinion or commercial success.

With materials playing such a predominant role in the instructional programs for children labeled learning disabled, it becomes important to evaluate, or at least to analyze, these materials in as professional a way as possible. Making judgments and decisions is never an easy task, and the effort required by the consumer education process is far less appealing than is the quick selection of a delicious looking package.

Ideally, materials and programs should have been validated by the publisher in that both formative and summative process description and data should be available. Without such information the potential user must rely on analyzing materials according to whatever relevant dimensions his experience and training have taught him. Only rarely is the question of what to look for addressed in the literature. The purpose of this paper is to review available resources and to suggest a methodology of systematic material or program analysis.

NONSPECIAL EDUCATION SOURCES

Outside of special education the problems of curriculum development and evaluation have been of long standing interest both in curriculum and instruction (e.g., Tyler 1950), and more recently through the instructional technology programs of psychology (e.g., Baker and Schutz 1971). Little of the activity has been of direct value to practicing instructional personnel. The major contribution has been to provide philosophies and knowledge bases which may be applied to curriculum problems.

Scott (1967) has come closer to consumer or practitioner needs by providing a comprehensive list of what he calls *determiners*. The determiners are a series of questions which may be used as the basis for comparing and making decisions about the quality and user-relevance of curriculum programs as well as proposals.

More intensive, focused work in consumer education has been effected by the Educational Products Information Exchange (EPIE) Institute. Membership in the Institute brings the subscriber a variety of services, including its targeted product evaluation reports. Although the publications are not specifically commissioned for special education, many frequently used materials are reviewed, e.g., *#48: Evaluations of Kits for Early Learning* (1973). Many product evaluations are written in the helpful format:

Publisher Says	*Reviewer Comments*

Dimensions of EPIE analyses vary according to the area under consideration. However, some critical concepts are addressed more consistently, such as "Level of Adult Competence," a six-point scale used to estimate how capable the in-charge adults must be to administer the program.

SPECIAL EDUCATION SOURCES

In special education very little is actually said about the methodology of materials analysis, selection or evaluation. Occasional references are made to task analysis, but rarely is the consumer systematically educated to identify critical or relevant instructional variables in materials under consideration.

Johnson has consistently, though subtly, assumed that learning disability teachers will be able to determine relevant instructional vari-

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ables and then choose materials accordingly (e.g., 1967). Hammill and Bartel (1975) provide a notable recent example of calling attention to the problem. Nearly two pages (pp. 10-11) are directly addressed to the selection and evaluation of instructional materials, with individual chapters giving "impression" evaluations of materials and programs mentioned.

For some time Hewett (1968) has conceptualized the major task of the special education teacher as evaluating the child's status in relation to seven hierarchical development goals, i.e., attention, response, order, exploratory, social, mastery, and achievement. The teacher selects tasks and materials with properties corresponding to that stage of development in each curricular area. The entire organization and management of the instructional program is then focused around centers where the child may engage in tasks at the appropriate "level" of self-control and social interaction.

Several authors have developed curriculum models in specific content areas. They are helpful in providing clues to what to look for in analyzing materials. Woodcock (1968) has applied an analytic framework to reading education materials. He proposes a three-dimensional model: (1) sequence gradation (part-to-whole/whole-to-part); (2) degree of structure (high, medium, low); (3) kind of symbol system (phonemic to nonalphabetic). Such dimensions are static in that they account only for properties which are independent of a dynamic instructional situation. However, they are most useful to consider when determining structural similarities and differences among reading programs.

Cawley and Vitello (1972) have presented a comprehensive model for the development of mathematics curricula. Major components include: (1) a learning unit, (2) an interactive unit, (3) a verbal information processing unit, and (4) a conceptual processing unit. Such a conceptual framework permits great refinement of assessment variables in mathematics.

At least two examples of applied instructional technology are found in special education. Armstrong (1971) has suggested a model of materials development and evaluation through 12 major steps from obtaining a research rationale (Step 1) to product dissemination (Step 12). Thiagarajan, Semmel, & Semmel (1974) have produced a how-to-do-it sourcebook for developing teacher training programs or packages. While neither of these approaches is immediately useful to the practicing teacher, they do provide a guide to evaluating how published materials have been developed and field tested.

Content analysis has been pioneered at the Olathe Educational Modulation Center (Van Etten 1969). Instructional materials were analyzed on a program, book, unit or lesson basis so that materials related to a specific skill such as "2 place addition" or "short-a-vowel sound" could be retrieved readily from a huge bank of computerized information. The teacher provides such salient characteristics as desired lesson content and purpose, format, mental age, etc., and descriptors of appropriate materials are matched to these. In each case the determination is made by publisher claim or analyzer judgment. The descriptors used provided a substantive approach to categorizing the scope and sequence of available materials.

The functional relevance of specific instructional variables in terms of how they affect or effect the desired instructional outcome has been the major focus of researchers in applied behavior analysis. For example, Smith and Lovitt have been able to determine a functional relationship between the vocal instructions given by the teacher and the quality of vocal responses of the child (1972). The primary contribution of applied behavior analysis in terms of its relevance to curriculum evaluation is twofold: (1) validating or invalidating instructional variables of interest so that they might be included or omitted from materials or programs; and (2) focusing upon the interaction with an individual student through analyzing functions rather than through correlational or experimental/control group research designs.

Ensminger (1970) has presented a two-dimensional model for selecting, modifying, and developing instructional materials for exceptional children. One dimension hypothesizes four sequentially dependent learning stages, i.e., motor learning, perceptual learning, language learning, and symbolic learning. The other dimension considers sensory modalities as the means of input into, and output-from, the learner. The Ensminger model is, as its author states, primarily an instructional model. As such it asks only three questions of the material to be analyzed: (1) In which hypothesized developmental stage can it be categorized? (2) What is the major sensory channel through which the stimulus will be received by the learner? (3) What major sensory channel is required for the learner to respond? While these questions certainly are relevant to instruction, they are somewhat limited, and they primarily are useful to the advocates of sensory-channel instructional models.

COMMENT ON CURRENT SOURCES

All of the disparate approaches noted may seem irrelevant to ongoing instruction. In fact, however, they all contribute in some way either to producing better instructional programs, or to helping the practitioner determine what to look for in selecting or assessing materials. Where materials decisions must be made, instructional personnel must learn to ask questions related to variables other than the persuasiveness of publisher's claim or the loveliness of the package. A beginning approach to systematic materials analysis is proposed in the development of an instructional materials Question Sheet (Q-Sheet) described below.

THE INSTRUCTIONAL MATERIALS Q-SHEET RATIONALE

"Q-Sheet" is a generic term which refers to any standard set of questions, probes or program elements to be used as the basis for systematic analysis, in this case, components of an instructional program. A Q-Sheet differs from a formalized taxonomy in that the questions need not be ordered and, in this sense, is a first step in the ultimate development of a taxonomy.

The application of a systematic set of questions to "ask" of any curriculum materials, programs[1] or proposals is useful in various situations such as:

(1) Commercial programs or components may be analyzed to determine how internally consistent the program elements are with the stated objectives and philosophy. Internal consistency is, at present, one of the best ways to determine how carefully the authors or the publisher have attended to "quality control."

(2) Comparative analyses may be made among similar programs or materials. This purpose is especially relevant when expensive materials are being considered for purchase. It is also useful when trying to detect any variances which might alter instruction in programs which may appear to be similar on the surface.

(3) Resource personnel may analyze components of classroom materials to determine just where a child is having difficulty. Or, if a child is to be moved from one level of service to another, the instructional program to which he will be moved must be analyzed thoroughly to determine the nature and amount of support that will be needed, or the portions to be modified.

(4) The "curricular history" of an individual student or a group may be taken and then analyzed to determine characteristically difficult or favorable areas for the child(ren), or to determine strengths and weaknesses in the program(s) with which they have interacted.

(5) Gaps in presently administered programs may be identified and "closed." For example, few programs provide reinforcement suggestions. Also, if a reading program is not concerned with language development or comprehension, then supplements must be provided in order to give the child a well-balanced program of instruction in the area.

(6) Appropriateness of program components or pieces may be easier to determine when they are systematically identified and pulled from the program as a whole rather than being imbedded in "the program."

(7) Available materials may be adapted or modified according to a systematic framework. However rudimentary, any classificatory scheme is a step beyond no system at all.

(8) For curriculum research purposes, materials variables may be systematically compared or manipulated.

(9) The consultant and supervisory functions are seen as less personally threatening

when a systematic scheme is used to comment on the appropriateness and needed modification of materials for a specific instructional purpose.

(10) The practitioner who is thoroughly familiar with several "typical" programs can more easily determine samenesses and differences in the details of new or related materials.

(11) Knowledge of materials is a part of what constitutes professional competence in the field of special education. Before a practitioner can be said to "know" a material or a program, he should be able to answer nearly any question posed, or to know which questions are irrelevant to the materials at hand.

The questions presented below are intended as a step in the process of improving the state of consumer and professional education in the selection and evaluation of instructional materials for the purposes just described.

BASIC Q-SHEET

(1) *What is the stated rationale for developing the program?*

Look for one or more statements of: (a) definition of the content area under study, e.g., reading; (b) philosophy regarding instruction in the area; or (c) dissatisfaction with specific aspects of other programs, or perhaps a previous program by the same publisher.

(2) *What is the rationale for selection of program elements or content?*

Look for comments on: (a) tradition; (b) experimental determination (always check this out in greater detail); (c) logic of the subject matter; (d) survey of other programs and their elements; or (e) the assumptions made concerning the content area, such as the linguistic base in a reading program.

(3) *How can the quality of the content be checked?*

This question is difficult. Usually some credence is given to the reputations of authors and publishers, as well as to supporting reference material. Usually "expert" opinion is needed in addition to a determination of the internal consistency of *all* program elements.

(4) *What is the scope of the program?*

Scope is the comprehensiveness or the breadth of the program. It determines how much of what it is possible to teach has been included in the program at hand. A program of limited scope may be desirable for teaching a specific skill, or as a supplement to an existing program which is weak in a particular area or variable.

(5) *What is the sequencing of skills or items or units?*

Sequence is the order the subject matter or elements are to be taught. Some materials are sequentially dependent so that mastery at each level is required before continuing to the next. Sequentially dependent curricula leave little room for flexible use or the pulling out of components. Other materials are "spiralled" so that the topic may be left and then returned to later. Paradoxically, spiralling may be helpful or detrimental. Sometimes leaving an area of difficulty for a while has the effect of desensitization. However, it may also be possible that mastery is never actually accounted for in a spiralled curriculum except when the particular topic disappears from "mention." Sequence may also be based upon several factors other than the sequential/spiral question. Logical organization of the subject matter may be a determiner; the curriculum may proceed from immediate to remote life experiences, or it may move from concrete to abstract symbolism.

(6) *How is the curriculum paced?*

Regulation of pacing is presently one of the major ways of controlling individualization of instruction. Several bits of information provide clues to intended and actual pacing of the materials or program:

(a) Are there differing starting times for various groups or individuals, and then essentially the same pacing along the way? If so, the modification is not in "pacing" but in readiness for the program.

- (b) Are "mastery" suggestions made along the way for those who need more or different experiences at various points? How is it suggested that such modifications be managed if in a group situation?
- (c) Do suggested instructional time lines presented elsewhere in the program mitigate against modifications in the pacing of instruction?

(7) *Is there evidence of any psychological principles of instruction which are content-free?*

Look for reference to the systematic use of stimulus control, reinforcement, rate of introduction, set induction, etc.

(8) *What are the specific techniques of instruction for each lesson?*

The more highly structured the lessons, the less likely it is that the success of the program depends upon teacher experience and previous training. More highly structured programs also lend themselves to use by aides and volunteers under the supervision of the teacher. On the other hand, it may happen that if little teacher variation is allowed or encouraged, the lesson may not be readily modifiable.

(9) *What are the specific modifications suggested for individualization?*

- (a) Is the individualization on a one-to-one basis, or intended for instruction within the group situation?
- (b) What are the bases for the suggestions made?
- (c) What is the range of suggestions or are they all pretty much alike?
- (d) What range of differences is accounted for?
- (e) Are the suggestions general, or are they specifically tied to potential instructional problems?

(10) *Is a prerequisite skill level or information base needed to administer the program?*

- (a) Is there a formalized, separate "package" of instruction available?
- (b) Is the training continuous as an integral part of each unit or lesson?
- (c) Are there ways to determine the instructional competency of personnel who would work with the program?

(11) *Are there "readiness" behaviors specified which are prerequisites for the student?*

- (a) Are assessment strategies included?
- (b) How are the behaviors to be acquired or taught?

(12) *How is reinforcement used in the program?*

- (a) If mentioned at all, note the definition well. In the majority of non-special education programs there is a tendency to equate reinforcement with repetition.
- (b) What kinds of reinforcement are suggested, e.g., social, tangible, edible, visual . . .?
- (c) Are there suggestions for how to determine what is reinforcing to an individual child?
- (d) Are schedules of reinforcement considered?
- (e) Are there specific examples, or generalized suggestions?
- (f) Is there a procedure for fading from tangible to social reinforcement?
- (g) Is there any discrepancy between notions of reinforcement and practices such as paper-grading or marking?

(13) *What is the format of the material to be presented?*

- (a) Is the material in kit, book, worksheet, chart or some other form?
- (b) How are the units organized?
- (c) What kind of type is used? Size? Style? Compactness?
- (d) If pictures are included, what kinds are there, and what are their purposes?
- (e) Are the page arrangements likely to make any difference to the learners?

(14) *How independently can the material be used?*

- (a) If independence of use is recommended, is there a systematic program to teach the child *how* to use the materials independently?

(b) How is progress in work habits or independence to be monitored?

(15) *Has any effort been made to assess or control the complexity of the language of instruction, either receptively or expressively?*

Does the teacher have any way of assessing whether the language level is appropriate? For example, in materials for young children, which "Wh_____" questions are introduced and in what sequence? Do these correspond with the developmental sequences in lanaguage and cognition?

(16) *What is the developmental interest level of the materials?*

Materials which are obviously intended for younger children are probably inappropriate for older students. On the other hand, the teacher actually may have to develop or provide background experiences, information or interests for some students. It should be noted that statements of "mental age" do not necessarily correspond to the "interest age" or to the "social age" of the child.

(17) *Are there behavioral objectives for the program or for the lessons?*

(a) Is there any attempt to justify the objectives or to determine their value?
(b) Are the objectives linked in any way to prior or to subsequent objectives?
(c) Are the statements complete in the sense of meeting behavioral criteria?
(d) What are the consequences of objectives assessment in terms of future instructional procedures?
(e) Is the program built on predetermined objectives, or do the objectives follow from the nature of the program?

(18) *What diagnostic assessments are provided?*

(a) Type
(b) Frequency?
(c) Pre/post, or continuous during instructional sequences?
(d) Feedback mechanisms to the learner and to the instructional program?
(e) What are the consequences of assessment feedback?

(19) *Is this program coordinated with any other programs?*

(a) Is the program part of a series or a unified approach by the same publisher? Can it be readily separated from other components?
(b) Are there recommendations for companion programs, or for previous and subsequent programs?

(20) *Have there been any attempts to determine readability or learner interest?*

What processes have been used, and are the results available?

(21) *What is the comparative cost of the program?*

An attempt should be made to estimate the cost-effectiveness of the program. Where similar materials are available, comparisons may be made. There may also be the feasibility of using "home-made" alternatives made in a workshop or by volunteers.

(22) *What is the realistic availability of the instructional components?*

If the program is desirable because of the variety or specific inclusion of certain components, it should be determined that these are actually available from the publisher or with funds allocated. This is especially important in the case of hardware needs. The budget factor is a critical one when considering the use of consumable materials.

(23) *Are testimonials, research, author claims, and publisher claims clearly differentiated?*

(a) Evidence of formative evaluation?
(b) Evidence of summative evaluation?
(c) Is there congruence between the program objectives and activities?
(d) Are the program development processes specified?

(24) *What are the target populations for whom the materials were developed?*

If the population characteristics are

stated, it is easier to assess the potential relevance of the materials to your population of interest.

(25) *Is it possible to foresee – and does the author note – any potential problems which might be encountered in using these materials?*

(a) How surmountable are the problems?

(b) How readily can the materials be modified to resolve the problems?

(26) *Can any of the features of this material or program be adapted or incorporated into other programs?*

Features such as self-correctional procedures, reinforcement techniques, etc. may be noted for use in other instructional situations.

(27) *Are any significant changes in the organization and management of the instructional situation required?*

(a) Are there special space and/or equipment requirements?

(b) Will the time/event schedule of the day need to be replanned?

(c) Will present child groupings be significantly affected? How?

(d) Are the descriptions of how the program is to be organized and managed stated clearly enough so that the program may be readily implemented?

(28) *Is it possible to isolate sensory channels as a major instructional variable?*

Keep in mind that for this purpose not only must the material itself be examined, but also the circumstances surrounding its actual presentation in the instructional situation.

(29) *How durable are the materials?*

Items that undergo a great deal of handling should be made of strong materials with protected surfaces. Storage or carrying of materials in kit or package form should also be considered in terms of the convenience and sturdiness of the packaging materials.

(30) *Is there any apparent or subtle bias toward or against a particular target group, e.g., women, blacks, Chicanos, or Indians?*

Many states or local school districts will have guidelines available for this kind of analysis.

(31) *Other significant features omitted from this list but which should be noted as relevant for user purposes.*

Considerations such as potential interaction patterns, the predominance of convergent/divergent responses, or detailed linguistic analysis may be of interest to special interest users.

LEARNING TO USE A BASIC Q-SHEET

Most persons who use a Q-Sheet to analyze curriculum materials, programs and proposals observe that the time required is formidable. It is questionable whether or not competence can ever be built satisfactorily at a preservice level because experience in instructional settings provides the practitioner with both purposes and sometimes subtle clues to identifying relevant features. If the process of dissecting materials is new to the reader, several suggestions are offered to assist with the development of competence.

At least two programs with the same content area such as social studies or arithmetic should be analyzed simultaneously in order to see more clearly the structural similarities and differences.

Several persons might work together so that different perceptions can be brought out and discussed. It is unlikely that complete agreement between analyzers will be reached.

Specific written reference should be made to the text or examples that cause the analyzer to make a given judgment about a feature. Others may wish to check, or the analyzer may wish to refer to certain previous author statements.

A more detailed Q-Sheet may be designed to accommodate specific user interests, e.g., consumer education, mathematics or social skills. Reading people may be interested more in language features; consumer education persons might be more concerned with the capability of using current examples of products.

At times only one instructional or materials variable may be examined over a wide variety of materials. This kind of analysis gives the user some idea of the range of ways in which that particular element is treated.

Different ways of comparing curricula or materials may be sampled by using some of the approaches mentioned in the Sources sections of this paper. In addition, of course, the Q-Sheet itself may be modified according to different conceptualizations of materials construction.

A very useful applied task is to modify an ongoing instructional program for a child according to a particular variable of interest. It is this ability, i.e., to alter the instructional situation systematically to produce a predictable and controlled result, that underlies clinical or diagnostic teaching. It is always the job of the teacher to discover under what conditions the child *does* learn.

Regardless of the particular approach used to learn to analyze materials in order to become a more knowledgeable consumer, the problem remains. Shortcuts to professionally defensible practices are few; professional growth and development are lifetime tasks. Attaining an understanding of how curricula are structured is one part of that development. It is hoped that the use of a Q-Sheet concept will make the task somewhat easier to understand. – *V. B.*

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Materials Analysis

Whether setting up a new LD program or working within an already established classroom, selection of materials is the teacher's first task. At a time when the cost of materials seems to be increasing geometrically and school boards are more than ever trying to hold the line on budgets, getting the most for your materials money is essential.

Boland (1976) offered several helpful ideas on how teachers can find out about what materials are available. One suggestion was to spend time at materials exhibits – another good reason to attend local, state, and national ACLD and CEC Conventions. And, local sales representatives of the materials companies are a valuable source of information on materials seldom tapped by teachers. Many of these men and women are former teachers. A local or state Bookman's Association List for your city or state will provide addresses and telephone numbers. Advertisements in professional journals provide introductory information. Often specimen sets of materials are available for 15- to 30-day inspection.

Unfortunately, obtaining access to new materials is only the beginning. Publishers often seem to know more about promotion and packaging than about special education and learning disabilities in particular. The package looks so "pretty and convenient" that, like some newlyweds, we say "I do" (want that material) before the product has been analyzed carefully.

Materials analysis must include answers to four major questions:

(1) What are the characteristics of the person for whom the material was designed?

(2) What is the material like? That is, how is it organized? How is the information presented? What does the learner have to do with the materials? How does the learner get feedback on his performance? How is learner performance evaluated?

(3) What is required of the teacher?

(4) What data are available to indicate whether this program works or is worth the money?

We have designed a Materials Evaluation Form (see Table I) which we believe will structure answers to these major questions as well as many subordinate questions.

When teachers are searching for materials they generally have in mind a child or children with a particular problem. Consequently, data on learner characteristics come first. This section includes such items as the chronological age, mental age, grade level, and reading level for which the material was designed. Information on level of physical development required to interact with the materials is also recorded. And, in this section, we note the developmental age of concepts used in the instructions and activities, an area that is frequently overlooked in materials preparation. Many times children perform unsuccessfully not because the task is beyond their ability, but because the instructions involve concepts which they do not understand.

Since teachers frequently are looking for a material with which to teach a specific objective, this was placed second on the Materials Evaluation Form. Specific purposes of the materials are listed, followed by a description of the organization of materials. The format is described by means of a checklist as is the primary sensory path to be used to transfer information content. Space and time requirements are included in this section. Type of learner interaction with the material is recorded here although it could just as well be included in the section under learner characteristics. Means by which the learner obtains feedback on his performance is recorded. Procedures for determining the starting point of intervention, criterion levels and determination of mastery conclude the materials description.

Another obvious concern when analyzing materials is to find out what teacher involvement is required, both during and after the tasks. A checklist of teacher aids which are provided to facilitate the teacher activities are also included in this section.

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The "efficiency quotient" of a material must also be considered. As educators we have not always scrutinized the material to see if the potential learning appeared equal to the cost involved. This unfortunate circumstance has aided in the propagation of attractively wrapped materials, often at a high cost-to-efficiency ratio. Though there is no precise formula for determining an efficiency quotient, the potential consumer can insure wiser purchasing habits by considering the several points noted under this item on the evaluation form.

Finally, a most important facet but probably one that will take the least time, is the analysis of the data available on the usefulness of the material. Little time is generally involved because most materials have little if any research or field test data supporting their efficacy. Here is another reason why teachers must not be "perceptually bound" by the nice colors and convenient packaging.

The Materials Evaluation Form is under almost constant revision with the addition and deletion of items. Suggestions from readers are welcome.

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TABLE I. Materials Evaluation Form.

Title: ____________________

Author: ____________________

Publisher: ____________________

Address: ____________________

____

Cost: ____________

1. LEARNER CHARACTERISTICS:

   a. Chronological age:
   b. Grade level:
   c. Mental age:
   d. Reading level:
   e. Specific population for which material was designed:
   f. Developmental age of concepts in instructions and activities:
   g. Level of physical development required:

_______ Major factor _______ Minor factor _______ Not important

Comment: ____________________

____

____

2. MATERIAL PURPOSE:

   a. What does material say it will do? ____________________

   ____

   b. Objectives:

   _______ Behavioral _______ Nonbehavioral

3. ORGANIZATION:

__________ Lessons, explain
__________ Units, explain
__________ Chapters, explain
Other ____

4. MATERIALS FORMAT:

__________ Live verbal input
__________ Records
__________ Tapes
__________ Film (bw/color)
__________ Filmstrips (bw/color)
__________ Posters (bw)
    __________ Consumable
    __________ Nonconsumable
__________ Worksheets
__________ Workbooks
    __________ Consumable
    __________ Nonconsumable
__________ Textbook
__________ Flashcards (bw/color)
__________ Models
__________ Demonstration
__________ Programmed

5. PRIMARY SENSORY PATH USED TO TRANSFER INFORMATION:

__________ Auditory (lectures, tapes, records, etc.)
__________ Audio-visual (tape & worksheets, sound film, etc.)
__________ Visual (filmstrips, flashcards, worksheets, workbooks, textbooks, etc.)
__________ Tactile-kinesthetic (raised surface, beaded, etc.)
__________ Olfactory (scent bottles)

6. SPACE REQUIREMENTS: ____

7. TIME REQUIREMENTS: ____

8. LEARNER INTERACTION:

__________ Motor
    __________ Physical activity (dance, jump, etc.)
    __________ Manipulation (beads, puzzles, etc.)
    __________ Write a response
    __________ Mark a response
    __________ Other ____
__________ Verbal
    __________ Answers questions
    __________ Repeats information
    __________ Spontaneous contribution
    __________ Other ____
__________ Visual-Motor
    __________ Copying tasks (bead or block patterns, etc.)
    __________ Tracing
    __________ Other ____
__________ Visual
    __________ Read
    __________ Observe

__________ Matching

__________ Other ______________________________

__________ Verbal-Motor

__________ Dramatization

__________ Other ______________________________

9. LEARNER KNOWLEDGE OF PROGRESS:

a. How does teacher and student know response is correct?

__________ Teacher checks student's work

__________ Self-checking by student when work is complete

__________ Immediate feedback process of some kind

Comment: ______________________________

____

10. EVALUATION AND DATA RECORDING PROCEDURES:

a. How is starting point of instruction established?

__________ Written test __________ Performance test __________ Criterion test

__________ Checklist __________ Oral test __________ Direct & Continuous measurement

__________ Direct & noncontinuous measurement

__________ Other ______________________________

Comment: ______________________________

____

____

b. How is mastery of content demonstrated and recorded?

__________ Written test __________ Performance test __________ Criterion test

__________ Checklist __________ Oral test __________ Direct & continuous measurement

__________ Direct & noncontinuous measurement

c. Data forms provided:

__________ Yes __________ No

d. Are criteria for acceptable performance stated?

__________ Yes, explain ______________________________

__________ No, explain ______________________________

Comment: ______________________________

____

____

11. TEACHER INVOLVEMENT REQUIRED: TEACHER PREPARATION (CHECK ONE)

__________ Extensive __________ Minimal __________ Reasonable

Teacher involvement during time in use:

__________ Constant interaction

__________ Teacher introduces & student completes

__________ Supportive help or monitor role

__________ Virtually none or none at all

Teacher responsibility when student is through with material:

__________ Teacher must check & provide feedback

__________ Virtually none or none at all

Comment: ____

____

12. TEACHER AIDS: IS THERE A TEACHER'S GUIDE OR MANUAL? ______ Yes ______ No

If yes, what does it include?

__________ Script

__________ Annotated co[illegible] student material

__________ Background information

__________ Extended activities

__________ Follow-up activities

__________ Other ____

Comment: ____

____

13. POTPOURRI:

General design (describe):

Illustrations (describe):

Print type and size:

14. EFFICIENCY QUOTIENT:

Cost vs. skills, concepts presented:

How many students can participate at one time?

Required teacher involvement?

How much time is required by the student?

__________ Consumable

__________ Reusable

15. FIELD TEST DATA:

__________ In manual or guide

__________ None given or available

__________ Available on request

Quality of data:

__________ High

__________ Average

__________ Poor

Comment. ____

____

16. RESEARCH DATA:

__________ In manual or guide

__________ None given or available

__________ Available on request

Quality of data:

__________ High

__________ Average

__________ Poor

Comment: ____

____

The first material selected for evaluation is Learning Concepts' Developmental Syntax Program developed by Lila Coughran and Betty Liles (see Table II).

TABLE II. Materials Evaluation Form (filled out).

Title: ***Developmental Syntax Program***
Author: ***L. Coughran and B. Z. Liles***
Publisher: ***Learning Concepts***
2501 N. Lamar
Austin, Texas 78705
(512) 474-6911
Cost: ***$29.95***

1. LEARNER CHARACTERISTICS:

a. Chronological age: ***any age with syntax problems in areas included in the program.***
b. Grade level: ***not specified.***
c. Mental age: ***not specified.***
d. Reading level: ***no reading required.***
e. Specific population for which material was designed: ***Initial developmental sample included children between the ages of three to seven.***
f. Developmental age of concepts in instructions and activities: ***Instructions are generally in the form of imperatives. Concepts include right/wrong (correct/incorrect), time (present and past tense), plurality, possession.***
g. Level of physical development required: ***pointing, raising hand, imitative speech.***

________ Major factor ____X____ Minor factor ________ Not important

Comments: ***According to the manual, the program has been used as is or with minor changes for children who are mentally retarded, hard of hearing, and those with severe language disorders.***

2. MATERIAL PURPOSE:

a. What does material say it will do? ***Material was designed to correct syntactical errors of omission, substitution, and transposition in the eight areas where these errors are most commonly found: articles, personal pronouns, possessive pronouns, verbs "is, are, have, has," past tense of regular and irregular verbs, and plurality.***

b. Objectives

____X____ Behavioral ________ Nonbehavioral

3. ORGANIZATION:

____X____ Lessons, explain ***(Eight lessons, with varying numbers of phases in each program, e.g., ear training, production, generalization to a different context.)***
________ Units, explain
________ Chapters, explain
________ Other ________________________________

4. MATERIALS FORMAT:

____X____ Live verbal input
________ Records
________ Tapes
________ Film (bw/color)
________ Filmstrips (bw/color)
____X____ Posters (bw)
________ Workbooks
    ________ Consumable
    ________ Nonconsumable
________ Textbook
____X____ Flashcards (bw/color)
________ Models

2588

______ Worksheets

______ Consumable

______ Nonconsumable

______ Demonstration

______ Programmed

5. PRIMARY SENSORY PATH USED TO TRANSFER INFORMATION:

___X___ Auditory (lectures, tapes, records, etc.)

______ Audio-visual (tape & worksheets, sound film, etc.)

___X___ Visual (filmstrips, flashcards, worksheets, workbooks, textbooks, etc.)

______ Tactile-kinesthetic (raised surface, beaded, etc.)

______ Olfactory (scent bottles)

6. SPACE REQUIREMENTS: *minimal – can be done at child's desk.*

7. TIME REQUIREMENTS: *7½ minutes per session.*

8. LEARNER INTERACTION:

___X___ Motor

  ______ Physical activity (dance, jump, etc.)

  ______ Manipulation (beads, puzzles, etc.)

  ______ Write a response

  ______ Mark a response

  ___X___ Other *pointing, raising hand*

______ Verbal

  ___X___ Answers questions

  ___X___ Repeats information

  ___X___ Spontaneous contribution

  ______ Other ______

______ Visual-Motor

  ______ Copying tasks (bead or block patterns, etc.)

  ______ Tracing

  ______ Other ______

______ Visual

  ______ Read

  ___X___ Observe

  ______ Matching

  ______ Other ______

______ Verbal-Motor

  ______ Dramatization

  ______ Other ______

9. LEARNER KNOWLEDGE OF PROGRESS:

a. How does teacher and student know response is correct?

___X___ Teacher checks student's work

______ Self-checking by student when work is complete

___X___ Immediate feedback process of some kind: *by teacher reinforcement for correct response.*

Comment: *A record form is provided which includes session number, date, phase-step, criterion, time, comments.*

10. EVALUATION AND DATA RECORDING PROCEDURES:

a. How is starting point of instruction established?

______ Written test

___X___ Performance test

______ Criterion test

______ Checklist

___X___ Oral test

______ Direct & continuous measurement

______ Direct & noncontinuous measurement

______ Other ______

Comment: *Auditory receptive competency to be determined by Test of Auditory Comprehension (Carrow 1973) and Peabody Picture Vocabulary Test (Dunn 1959). Syntactical errors determined by analysis of a taped sample of 50 utterances; e.g., Program 1: Articles – transposition "home I run." On the basis of errors appropriate, programs are selected and used in sequential order.*

b. How is mastery of content demonstrated and recorded?

______ Written test

______ Performance test

___X___ Criterion test

______ Checklist

___X___ Oral test

___X___ Direct & continuous measurement

______ Direct & noncontinuous measurement

c. Data forms provided:

___X___ Yes

______ No

d. Are criteria for acceptable performance stated?

___X___ Yes, explain *(each step requires 10 consecutively correct productions.)*

______ No, explain

Comment: *Provision is made for children with attention spans of less than the 7½ minute session length.*

11. TEACHER INVOLVEMENT REQUIRED: TEACHER PREPARATION (CHECK ONE)

___X___ Extensive

______ Minimal

______ Reasonable

Teacher involvement during time in use:

___X___ Constant interaction

______ Teacher introduces & student completes

______ Supportive help or monitor role

______ Virtually none or none at all

Teacher responsibility when student is through with material:

______ Teacher must check & provide feedback

___X___ Virtually none or none at all

Comment: *Although the interaction is continuous, the sessions are brief and no other involvement is required except to complete the short record form previously described.*

12. TEACHER AIDS: IS THERE A TEACHER'S GUIDE OR MANUAL? ___X___ Yes ______ No

If yes, what does it include?

___X___ Script

______ Annotated copy of student material

___X___ Background information

___X___ Extended activities

______ Follow-up activities

______ Other ______

Comment: *Page layout makes script readable. Ample space is provided for teacher notes.*

13. **POTPOURRI:**

General design (describe):	Illustrations (describe):	Print type and size:
Teacher's guide & poster in single looseleaf notebook. Letter, picture, and word cards are contained 3 X 5 inch plastic box.	***Black & white line drawings.***	***Easily readable; type size varies.***

14. EFFICIENCY QUOTIENT:

Cost vs. skills, concepts presented	How many students can participate at one time?	Required teacher involvement?	How much time is required by the student?
	One	*Continuous*	*7½ minutes per session until criterion 10 out of 10 responses consecutively correct*

__________ Consumable ____X____ Reusable

15. FIELD TEST DATA:

____X____ In manual or guide __________ Available on request

__________ None given or available

Quality of data:

__________ High

____X____ Average

__________ Poor

Comment: ***Sample size was only six in developmental study. Results of a telephone survey for 25 of approximately 500 speech clinicians contacted is included. No reason is given why the number listed is so small when the actual number surveyed is quite large. Some strong points listed by the clinician were, "easily modified to fit special needs, highly structured, easy to follow." Weak points include "need more programs for other errors, need to supplement, and too structured."***

16. RESEARCH DATA:

__________ In manual or guide __________ Available on request

____X____ None given or available

Quality of data:

__________ High

__________ Average

__________ Poor

Comment: ____

MATERIALS ANALYSIS

Task 1

1. Bibliographic information and price.

2. Instructional area and skills scope/sequence.

3. Component parts of the material.

4. Level of material (readability, vocabulary control, interest).

5. Quality (packaging, print, illustration, paper durability).

6. Format (form, layout, receptive and expressive requirements, and special equipment needs).

7. Support materials (teacher's manuals and resources, student evaluations, objective clusters, etc.).

8. Time requirements (length of tasks, flexibility, scheduling).

9. Field test and research data.

10. Method, approach, or theoretical bases.

Wilson J., Selecting Educational Materials and Resources, *Teaching Children with Learning and Behavior Problems*, 2nd Ed., Hammill & Bartel.

Rationale for Materials Selection Based Upon Evaluation Data

Task 2

Bibliographic Information:

Skills/Content:

Rationale for Selection:

TEACHER ASSESSMENT OF SCHOOL-RELATED PROBLEMS

Regardless of the instructional setting, the teacher who would individualize instruction or objectively demonstrate his pupil's progress must have a basic knowledge of tests and their proper uses and of diagnostic teaching techniques. A teacher's understanding of assessment is so important that a section on assessment is included in each of the chapters that follow. These sections deal with both formal and informal assessment techniques that are used to tap essential school-related abilities. General information regarding teacher assessment, interpretation of test data, and hazards of evaluation are presented in this chapter.

Formal Testing

The formal evaluation, a part of the total diagnostic effort, is (1) characterized by the use of standardized tests, (2) often requires some degree of training for proper administration, and (3) may be undertaken in the classroom by the teacher or in settings other than the classroom by personnel employed for the expressed purpose of testing children. The information acquired is of a decidedly quantitative nature and tends to compare a specific child's performance with national or regional normative data. The results, therefore, are often reported in terms of quotients, scaled scores, grade equivalents, or percentiles. In general, formal evaluation attempts to assess many areas of mental function, including intelligence, language development, academic achievement, speech development, perceptual-motor skills, and social and emotional development.

The number of standardized testing instruments which the teacher may select are almost limitless. A comprehensive resource is Buros (1972), *The Seventh Mental Measurements Yearbook*, in which most of the commonly used tests are reviewed. If the teacher needs a quick critical evaluation of an instrument, he should consult Hoepfner, Strickland, Stangel, Jansen, and Patalino (1970). In their book, *Elementary School Test Evaluations*, tests relating to language arts, social studies, social skills, perception, mathematics, intelligence, and perception, among other abilities, are rated "poor, fair, or good" on such factors as test validity, format, norm adequacy, and administration time.

Regrettably, not all of the available tests have been carefully constructed, so the teacher must choose among them with care. It is essential that the teacher have a clear idea of what he wants to measure and be able to specify it precisely. It is not enough to express an interest in obtaining a test of reading. Instead, the teacher must specify the kind of reading to be measured—silent, oral, word-call, word-recognition, or comprehension.

Once the type of reading skill to be tested has been decided upon, the teacher must review the tests that are applicable. The major concern now shifts to reliability. If the teacher intends to utilize the test information for diagnosing problems in individual pupils, the test employed must have a sufficiently high reliability coefficient; it must exceed .80 (Anastasi, 1968), though some authorities prefer .90 or better (Guilford, 1956). Tests whose reliabilities do not reach this level are of dubious diagnostic value to the teacher. If, however, the teacher is involved in conducting research, where the performance of groups rather than of individuals is of primary interest, tests of lower reliability are suitable. For teachers who would like to know more about the concepts of reliability and validity and their role in the classroom, the book by Garrett (1965), *Testing for Teachers*, or any other introductory measurement textbook is recommended.

The advantages of formal tests lie in their objectivity. They are standardized; their reliabilities and validities are known; and they have national reputations. The grade-equivalent figure or percentile score provides a capsule description of the child's overall skills, providing useful information if the child has just been assigned to a new classroom, if the teacher is attempting to summarize his achievement or note his year-to-year overall growth, or if the teacher is trying to decide whether the child is in need of more intensive and detailed informal evaluation.

The disadvantages of formal tests should, however, be kept firmly in mind. The results of a sound-blending test may enable the teacher to identify particular children with problems in that area, but they do not indicate the specific blends in need of development. Problem children vary widely in day-to-day performance; tests administered on any given day can reflect pupil fatigue, attitude, or temperament, rather than specific skill in a subject.

Many tests and scales are described in this book which are not recommended for teacher use. Usually, the reason is the test's low reliability or

From Donald L. Hammill and Nellie R. Bartel, Teaching Children with Learning and Behavior Problems. Copyright 1975 by

lack of demonstrated school value. They are included because, whether good or inadequate, these tests are employed extensively in schools, and therefore discussion of them is necessary to point out their shortcomings and specify possible situations in which they might be used.

Informal Assessment

The informal evaluation should be undertaken by an educationally oriented person, usually an educational diagnostician or a teacher. Informal evaluation is used to detect areas of weakness and strength; to verify, probe, or discard the conclusions and recommendations based on the formal evaluation; to deduce the child's particular instructional or behavioral needs; and to formulate a remedial program for him. This is accomplished through an ongoing process of teaching the child and analyzing his responses to various instructional tasks. For example, the teacher may wish to determine if the child "knows his colors." To our knowledge, there are no standardized tests that yield this information; therefore, the teacher must discover the child's competency on his own by probing for answers to the following questions.

1. Can he match the basic colors (place red chips together, blue chips together, and so forth)? If not, what colors does he have difficulty in matching?
2. If asked to point to the red chip, then to the blue chip, and so forth, can he select the correct chip from among others of different colors?
3. If the teacher points to the red chip, then to the blue chip, and so forth and says "What color is this?" does the child answer correctly?

These three questions all relate to the general question of whether or not the child can recognize colors, but they also provide different kinds of information about the level of his knowledge, the particular colors he does not know, and how to begin to teach him. First he learns to discriminate among the colors, then he learns the labels (receptive language), and finally he uses the labels in speech (expressive language).

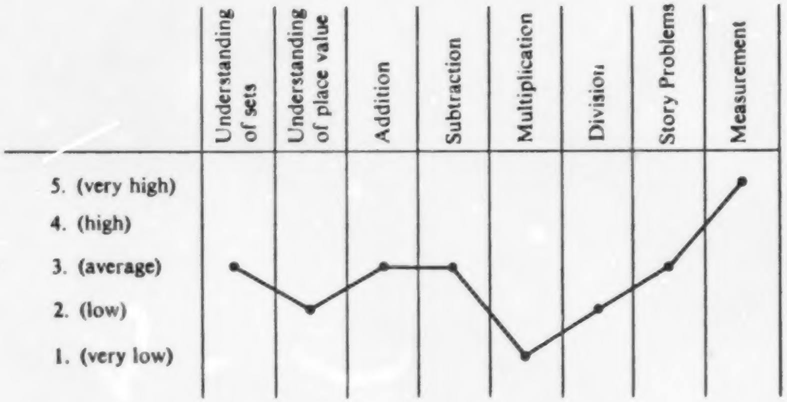
The testing process just described is called diagnostic or prescriptive teaching. For the teacher, it is by far the most profitable assessment procedure, but it too has hazards that should be pointed out. First, the method is only as good as the competency of the teacher; second, the teacher's experience often is a poor substitute for normative data; and third, the reliability of the teacher as an observer is always unknown. However, the effectiveness of a teacher is invariably dependent on his capacity to provide individualization of instruction for his pupils (i.e., individual planning, not necessarily tutoring on a one-to-one basis). To individualize instruction the teacher must engage in diagnostic teaching.

Several educators specialize in this approach (Johnson & Myklebust, 1967; Johnson, 1967; Smith, 1968, 1969; Valett, 1967; Reger, Schroeder, & Uschold, 1968; Peters, 1965; Stephens, 1970). Their approaches include a careful diagnosis of the tasks that the child can and cannot accomplish, followed by a remediation that is tailored to the individual child's strengths and weaknesses. Constant monitoring of the child's progress is necessary to ensure that the remediation efforts remain relevant.

A carefully conceived description of how instructional decisions based on diagnostic information are actually made has recently been offered by Drew, Freston, and Logan (1972). Speaking from a perspective of what they call "a combined evaluative approach," Drew et al. portray the teacher's role as heavily oriented toward criterion-referenced evaluation. Criterion-referenced evaluation implies that the teacher will assess a youngster's skills primarily in terms of the actual operations the child can or cannot perform, rather than in terms of how he stands relative to some norm or relative standard (such as that utilized in formal assessment). For example, the child is described as having mastered the sounds of all the vowels and consonants including blends, except for "str," "thr," and "scr," instead of designating him as one who reads orally at a grade equivalent of 2.2. The most enthusiastic supporters of criterion-referenced evaluation are teachers; this is not surprising in view of the fact that this approach yields information that is very directly usable by the teacher in planning remediation activities. Knowing that a child has not yet mastered the blends "str," "thr," and "scr" is more helpful for making day-to-day instructional decisions than knowing he reads at a grade equivalent of 2.2.

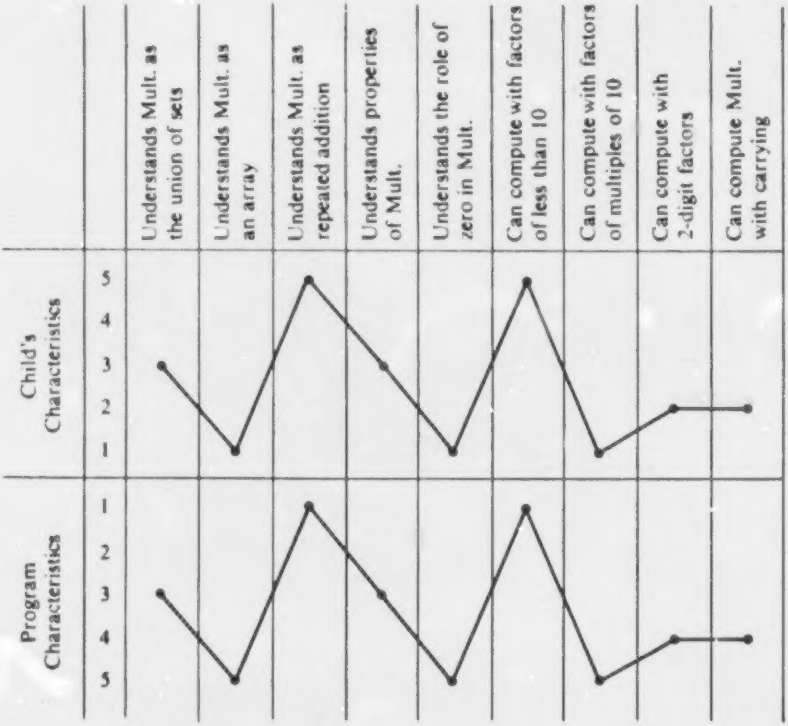
FROM ASSESSMENT TO REMEDIATION

Once the teacher has completed the analysis of a child's performance and has identified those areas of his functioning that need strengthening, instructional objectives can be formulated. These are usually apparent if the preceding diagnostic analysis has been carefully carried out. Drew et al. (1972) have suggested that the teacher profile the strengths and weaknesses of the child's skills on a Likert type of scale. In arithmetic, for example, a child's initial profile might appear as follows:



The child's profile in the graph of arithmetic ability would be interpreted to indicate that the child is having a great deal of difficulty in multiplication (he has not yet been exposed to division), and a further weakness is apparent in his understanding of place value.

The next task for the teacher is to further explore the child's trouble in multiplication and place value. To consider the multiplication example only, the teacher might probe further as follows:



In the second level of the graph, immediately below the child's characteristics, the profile of a multiplication program is sketched that should be maximally effective with the child. Note, for example, that the program is very strong in presenting multiplication as an array of rows and columns (precisely where the child is weakest), pays little attention to multiplication as repeated addition (which the child has already mastered), and emphasizes the role of zero and multiplying by multiples of 10 (both areas where the child is very weak).

It is not expected that the teacher will find ready-made programs for every profile of abilities and disabilities that might be discovered in his classroom. The teacher will have to adapt, modify, and improvise. Sometimes the two profiles—child characteristics and program characteristics—will not fit well. In that case, it is still important for the teacher to sketch the interface, so that he will be cognizant of potential problems and be able to anticipate program failures. There will be cases in which the teacher is at a loss as to how to plan a program that fits a particular child's needs. In those cases, he should plot the child's profile in the area of difficulty and consult with the nearest regional Instructional Materials Center and possibly acquire the appropriate materials there. A perusal of the many approaches suggested in the subsequent chapters of this book for arithmetic, reading, language, spelling, and writing should also provide ideas for the teacher who is faced with the difficult but crucial task of matching child variables to program variables.

It is not suggested that every time a teacher wants to make an instructional decision, he go through the lengthy, time-consuming procedures spelled out here. It would be impossible for the teacher to have any time left to teach if that were the case. However, we are aware that in every classroom there are certain children who have particular difficulty in given subject areas. With these children, previous efforts at remediation usually have yielded little improvement. Ultimately, the time spent in detailed diagnosis and planning is time well spent for these children, and the pinpointing of areas of difficulty is well worth the extra effort involved.

SELECTION AND EVALUATION OF INSTRUCTIONAL MATERIALS

To some extent the selection of instructional materials reflects an individual teacher's subjective preferences in style, format, and response mode. However, an awareness of certain guidelines can facilitate intelligent curricular decision making. These guidelines have to do with three basic aspects: material selection and design, procedure or method, and practicality.

Design

Curriculum design is concerned with the overall organization of the school experiences of a child. Specific questions that might be posed as questions of design are:

1. Is the material organized into subject areas such as reading, arithmetic, and social studies, or is it organized in terms of "experiences" or "units" that cut across traditional subjects? Which approach makes the most sense for the child under consideration?

2. If organized in terms of subject areas, is the material ordered in heirarchical, sequential steps? Are the sequences related to known facts in child development, e.g., the Piagetian stages of cognitive development? Is the order of sequences logically related to such order as exists within the subject area itself—that is, in arithmetic, multiplication should be taught before division because multiplication skills are required in the operations of division. Ideally, instructional materials should incorporate both what is known about child development and what is known about the structure of the discipline itself.

3. What criterion is required for the student to proceed from one step to the next? Is mastery of a preceding task a prerequisite to going on to a subsequent task? Is some kind of prerequisite external "readiness scores" required before entry into the program or before going on to new units? If so, do these readiness scores bear a manifest relationship to the material they are supposed to make the child ready for? In general, the closer the readiness task is to the actual required skill, the more effective its prediction. For example, ability to walk a balance beam has much less "face validity" as a reading readiness predictor than, say, being able to distinguish "d" from "b."

4. A further consideration underlying the design of materials has to do with its rationale. Is there implicit or explicit evidence that sound teaching and/or learning principles were involved? For example, have the authors and producers accounted for motivational factors? Is there any utilization of reinforcement (tangible rewards, social approval, or immediate feedback to the child)? Are basic skills incorporated as a basis for further learning? Is there any research evidence on soundness of the rationale, i.e., are there basic or applied studies supporting the approach?

A well-designed program has clearly defined objectives for each program component. In any given lesson, the teacher should be able to state unequivocally what the purpose of the lesson is. How clear are the objectives for the materials under consideration? Are the objectives precise enough for the teacher to ascertain whether they have been reached or not? Are the objectives appropriate for the age and grade of the child? Are the objectives compatible with the learning experiences of the child in other subject areas, e.g., do they permit coordination between social studies and reading?

Method or Procedure

Questions of method or procedure are variations of the question, what do the teacher and the pupils have to do to successfully use the materials? One set of these questions concerns the "who" of the instructional process. Can the children be instructed as one large group? If not, are provisions made for occupying the other members of the class productively? Can the material be adapted for either a tutoring, small group, or large group situation? Must the teacher be actively involved in all phases of the instruction, or can the youngsters work on their own some or all of the time? To use the materials, what does the teacher have to do or say? Are the instructions too complicated? Is it physically possible for the teacher to do what is required, e.g., position figures on the flannelboard while reading verbatim instructions, and at the same time walking up and down the aisles to check each child's response? Is there a balance between teacher-doing and pupil-doing, and between teacher-talk and pupil-talk? Are a variety of responses elicited from the pupils, e.g., oral and written responses, manipulation, painting, demonstrating? Are several sensory modalities, either simply or in combination, involved? Is there undue penalty for a child who is deficient in one response; e.g., the child who cannot use his hands or has difficulty with auditory discriminations? Are the required responses related to the desired learning? For example, if the desired outcome is silent reading comprehension, is the child required to read silently and tested on his mastery, or is he merely required to "word call" orally?

Is the material sufficiently flexible to make possible adaptations that facilitate learning? For example, can the child who has a visual-perceptual problem still learn through auditory or tactile means? Is there a way that the children can serve as each others' tutors, to relieve pressure on the teacher? Can the material readily be broken into smaller steps, or supplemented with other materials, for those children who have difficulty?

Can the material be individualized, both in terms of rate of presentation, and in terms of intensity? That is, can the rapid learner move through the material quickly, and the slow learner more deliberately? Are there provisions for the child who is making virtually no incorrect responses to skip unnecessary examples or pages? Conversely, does the material incorporate an opportunity for the child who is making many errors to relearn the material, perhaps through a different format or presentation?

What flexibility is present in the materials with respect to switching to another approach if that should appear desirable? Some programs are so unique that switching to another is impractical because of the material's limited ability to generalize to other areas. For example, if a teacher decided to use a reading program with a unique orthography, he must be aware of the fact that this is a long-term decision, and difficult to change. One cannot switch orthographies every few months without seriously hampering a child's growth in reading. Similarly, certain programmed programs in reading and arithmetic are so unique that there are really no alternatives to which the child may reasonably be switched if it becomes necessary to do so for reasons of program failure or because of a move on the part of the child.

Practical Considerations

Finally, there are some practical considerations that need to be taken into account in instructional material selection. First, how attractive is the material? Would a youngster want to use it because of its appeal, effective use of color, format, motivational devices, attractive visual arrangement, uniqueness, or variation in presentation made? Are the materials practical and durable? Is the price reasonable? Are there any hazardous elements present? Can the material be used independently or does it require close supervision? Is the quality of drawings or photographs adequate? Can the materials be brought out, used, and reassembled for storage in a reasonable length of time? Are the materials reusable, or must new kits, sets, or workbooks be purchased for each additional student? Is use of the materials or the grading of the students' responses unnecessarily boring or laborious for the teacher?

The teacher will quickly find that no one program, no matter how excellent, will work with all children and some programs will not work with any children. For this reason, a teacher needs to have access to many approaches involving a variety of different formats, strategies, and modalities. Based on his knowledge of the needs of a particular child, the teacher is then able to make intelligent decisions regarding the how, what, and when of instruction. This knowledge is particularly imperative since few companies see any need or obligation to demonstrate that their products do in fact work, before offering them to the public. The materials are beautifully packaged, widely advertised, and sold in staggeringly large quantities, usually long before there is evidence to support their value. Efficacy research follows the availability of commercial materials by three to five years, if ever. Therefore, teachers almost always are required to use unvalidated programs. There exists no "consumer's report" for teachers, no book that can be consulted to point out shortcomings, limitations, or strengths of the various materials. It is strictly a "buyer, beware" market.

However, many of the teaching methods commonly used in the schools have existed for years and a body of research has accumulated about many of them. The teacher, therefore, is well advised to undertake a library investigation of the particular method he wants to implement to see what success others have had with the program. *Educational Index, Dissertation Abstracts, Mental Retardation Abstracts*, and *Special Education Abstracts* are profitable initial sources of information. Many companies have assembled data on their programs and will provide it upon request; of course, do not expect to find anything critical from this source.

Although research on a particular method may not exist, use of that method should not necessarily be avoided. The teacher could use it on an experimental basis. For example, the teacher can test pupils in arithmetic, implement the unvalidated program for several months, and then retest the pupils to see if the program was indeed profitable.

Task 3

Name of Pupil:

Exceptional Learner Characteristics:

Skill or content areas:

Strengths:	Weaknesses:
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

MATERIALS ANALYSIS

Task 5

1. Bibliographic information and price.

2. Instructional area and skills scope/sequence.

3. Component parts of the material.

4. Level of material (readability, vocabulary control, interest).

5. Quality (packaging, print, illustration, paper durability).

6. Format (form, layout, receptive and expressive requirements, and special equipment needs).

7. Support materials (teacher's manuals and resources, student evaluations, objective clusters, etc.).

8. Time requirements (length of tasks, flexibility, scheduling).

9. Field test and research data.

10. Method, approach, or theoretical bases.

Wilson J., Selecting Educational Materials and Resources, *Teaching Children with Learning and Behavior Problems*, 2nd Ed., Hammill & Bartel.

Task 6
MATERIALS PROFILE

1. Requires Master	2. Requires high Ability	3. Requires Competency	4. Allows for some error or flexibility	5. Not essential for task	
					Prerequisite skills for use of media/material. example: The student must be able to match upper and lower case letters.
					Process requirements for use of media/materials.
					1. Input requirements (example: follow verbal directions.)
					2. Cognitive demands (example: recall the shapes of 5 letters without visual clues.)
					3. Output requirements (example: write 5 letters without visual clues.)

PUPIL INFORMATION PROFILE

Task 7

Target Skill: ______________________________

Pupil Characteristics		Understands Mult. as the union of sets	Understands Multi. as an array	Understands Mult. as repeated addition	Understands Properties of Mult.	Understands role of zero in Mult.	Can compute with factors of less than 10	Can compute with factors of multiples of 10	Can compute with 2-digit factors	Can compute Mult. with carrying	
Program Characteristics	5										
	4										
	3										
	2										
	1										
	1										
	2										
	3										
	4										
	5										

FACTORS IN LEARNING

Task 8

Complete the information for each variable by briefly describing the situation as it currently exists.

1. Space

2. Time

3. Multiplicity

4. Difficulty Level

5. Language

6. Interpersonal relationship factor

Lerner, J., Adaptations of Materials: Instructional Situation.

ORGANIZING AND PLANNING FOR INDIVIDUAL AND GROUP INSTRUCTION

by
P. Jeannie Kleinhammer
University of Kansas

Decisions on how to group children for instruction and how to plan for individual and group instruction are necessary skills for all teachers. In dealing with students who have special needs or a wide range of needs, the teacher must be capable of providing for a wide variety of instructional arrangements.

Student Outcomes

Upon completion of this module the student will be able to identify the types of grouping needed for instruction and will be able to plan instruction appropriate for delivery to individuals, small groups and large groups.

Instructor Information

Prerequisites:

Prior to the module the student should be competent in the following:

1. Recognizing and identifying behavioral characteristics of normal and atypical developmental patterns.
2. Knowledge and application of classroom assessment procedures appropriate for exceptional children.
3. The management of academic and non-academic behaviors of typical and atypical learners.

Organization:

The module consists of severals terminal objectives related to both the identification of varying patterns of grouping for instruction as well as for the planning of instruction for children in each type of grouping. There are enabling activities associated with each objective that include assigned readings, class discussion, and written activity sheets.

Content Overview:

The module contains readings and activities related for instructional arrangements that include:

1. Individual Groupings

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2. Small-group Instruction:
    grouping by academic strengths and deficits
    grouping by achievement level
    grouping by needed skills
    grouping by interest
    grouping for social purposes
    grouping for special purposes

3. Large-group Instruction

Suggestions for Teaching:

The module will require approximately 3 hours of instruction. It is recommended that this time be spread over several sessions to allow the student adequate time to cover the information and complete the activities. The module should be delivered in a course that has a practicum and/or opportunity for the student to have contact with a child and/or children in a classroom setting. All student activity sheets are included with the module. Required readings which are not included with the module should be placed on reserve in an educational library.

Evaluation:

The student evaluation procedures are incorporated into the enabling activities. The procedures include group class participation, task sheets and assigned readings. The activities include practice of the actual skills taught in the module and also critical evaluation of the readings and practices related to grouping.

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Prospectus

The goal of the individualized instructional setting is to develop appropriate learning experiences to meet the unique needs of each child. These learning situations may be individual in nature, or they may be small group or large group experiences. Whatever the case, planning instruction is different for each kind of group. This module provides you with an overview of instructional planning for individual, small group, and large group learning situations so that individualized instruction can be realized.

Student Objectives	**Enabling Activities**
1. The student will describe individual, small group, and large group settings which can be used for providing appropriate instructions.	1. Reading 1, Kleinhammer, 1977, pp. 1-4.
2. The student can define individualized instruction.	1. Reading 2, Lerner, pp. 102-118. 2. Class activity: Using Handout 1 students should develop a definition of individualized instruction which takes into account the need for modification of content, learning environment, and teacher behaviors based on learning rate, learning style, interests, and needed skills of the individual learner. 3. Class discussion: Review definitions of individualized instruction. Teacher trainees reach consensus on definition.
3. The student can arrange small group instruction for children who demonstrate similar academic strenghts and deficits as well as students who exhibit similar interests in a common task.	
4. The student will define the following: Achievement level groups; needed skills groups; interest groups; social groups; special purpose groups.	1. Reading 3, Musgrave, pp. 68-88. 2. Class Activity: Complete Student Handout 2. Students should briefly define, without reference to Musgrave, achievement level groups, needed skills groups, interest groups, social groups, and special purpose groups.

Student Objectives (cont.)	Enabling Activities (cont.)
5. The student can describe how children might be assigned to needed skill groups.	1. Class Activity: Students should list subskills in the relevant content area which could serve as a basis for grouping students. 2. Class discussion: Discuss needed skills groupings in terms of skills identified by students. Students will evaluate each skill identified with regard to the possible length of time required to teach the skill. Discuss implications of long term groupings to achieve broad goals in terms of learner interest and self concept.
6. The student can describe how children might be assigned to interest groups, social groups, or special purpose groups.	1. Reading 4, Kleinhammer, 1978. 2. Class activity: Based on readings from Kleinhammer and Musgrave, students list activities which might be used to form interest groups with students at various levels. 3. Class discussion: Discuss activities listed by students in terms of roles which might be assumed by (a) non-readers, (b) children with physical handicaps, (c) children with sensory handicaps.
7. The student can describe large groups activities including discussion questioning modes.	1. Reading 5, McKnight, pp. 27-28.
8. The student can describe how needs of individual students can be met in each grouping arrangement.	1. Review Reading 4, Kleinhammer, 1978. 2. Class discussion: Students discuss individual, small group, and large group settings on basis of previous readings. Add any appropriate discriptions of instructional settings on basis of suggestions.
9. The student can critique and add to a list of suggestions for effective grouping.	1. Reading 6, Musgrave, pp. 87-89. 2. Class actitivty: Students critique Musgrave's suggestions for effective grouping and add recommendations of their own.

Student Objectives (cont.)	Enabling Activities (cont.)
10. The student can describe ethical considerations in grouping children by achievement levels, needed skills, and interests.	1. Reading 7A, Ross, DeYoung and Cohen, pp. 6-7. 2. Class activity: On the basis of Study Questions (Handout 3) students will write a one to two page paper describing eithical consequences of achievement groupings, length of time in needed skill groupings, and educational and social considerations for interest groupings.
11. The student can describe advantages and disadvantages of programmed individual learning experiences.	1. Reading 8, Herman, pp. 113-124. 2. Class Activity: Using Handout 4, students should list advantages and disadvantages of programmed individual learning experiences. 3. Class discussion: Students will report on advantages and disadvantages of programmed individual learning experiences. Discussion question: Is programmed instruction the same as individualized instruction?
12. The student can recommend changes in instruction which will make each instructional setting appropriate to the individual learner.	1. Class activity: On the basis of Handout 5, students will describe their observations of learners in small group, individual, and large group settings. Students will describe recommended changes in instructional settings. Students will discuss how each grouping can be used for individualized instruction.

Readings:

1. Kleinhammer, P. Jeannie, "Analysis of Instructional Settings for Mainstreamed Students," 1977.

2. Lerner, Janet W. *Children with Learning Disabilities*. Boston: Houghton Mifflin Company, 1976, pp. 102-118.

3. Musgrave, G. Ray. *Individualized Instruction: Teaching Strategies Focusing on the Learner*. Boston: Allyn and Bacon, Inc. 1975, pp. 68-88.

4. Kleinhammer, P. Jeannie, "Grouping Students by Interest, Social Preferences, or Special Purposes," 1978.

5. McKnight, Philip C.; Schick, Kaethe; and Cleaver, Grace A. *On Teaching*. Lawrence, Kansas: Office of Instructional Resources, 1975, pp. 27-28.

6. Musgrave, G. Ray. *Individualized Instruction: Teaching Strategies Focusing on the Learner*. Boston: Allyn and Bacon, Inc. 1975, pp. 87-89.

7. A. Ross, Sterling L.; DeYoung, Henry G.; and Cohen, Julius S., "Confrontation: Special Education Placement and the Law," *Exceptional Children*, September, 1971, pp. 6-7.

8. Herman, Therese M. *Creating Learning Environments*. Boston: Allyn and Bacon, Inc. 1977, pp. 113-124.

Reading 1

P. J. Kleinhammer, 1977

ANALYSIS OF INSTRUCTIONAL SETTING FOR MAINSTREAMED STUDENTS

	Frequency in Setting	Space Arrangement	Purpose/Curriculum	Teacher Behavior
Individual	1. Depends on purpose. 2. May range from much of day (child completes contract for academic work) to brief (5-10 min.) intervals. 3. Should never be used exclusively for 1 child.	1. Cubicles 2. Study carrels. 3. "Offices" 4. Independent work at seat with rest of class. 5. Child decides when and where. CAUTION: Never use for punishment. Can be used to provide quiet time if not suggested in punishing way.	1. Intensive work on one skill. 2. To assess student. 3. To try different curriculum and/or materials on basis of student needs. 4. To provide enrichment or independent study for student who has mastered other work. 5. Use of special media/materials: Language master Slide/tape or filmstrip Tape recorder Braille typewriter Independent study materials. Manipulative materials Drill or practice materials. Programmed materials.	1. Teacher directed: Teacher give directions, child responds. 2. Peer tutoring: Child receives 1-1 assistance from another child; or tutor acts as "secretary" for student who cannot read material or write responses. CAUTION: should be agreeable to tutor and student. Tutors should receive complete directions from teachers. 3. Child directed: Child chooses independent project. Child completes work assigned by teacher.

Analysis of Instructional Settings for Mainstreamed Students
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	Frequency in Setting	Space Arrangement	Purpose/Curriculum	Teacher Behavior
Small Group	1. Commonly used several times a day with each student included in at least one small group. 2. CAUTION: Avoid low to high groups. Needed skill groupings and interest groups should be used. Don't "lock student in" to group of one ability level. 3. Often used 30-45 min. per setting. 4. Student may move to new group when needed skill is mastered.	1. Usually located in separate part of room so as not to interfere with other students' work. 2. May consist of learning centers for one or more subjects. 3. May consist of interest or special project centers. 4. May consist of small group of children with teacher. No materials or equipment other than texts or worksheets.	1. Intensive work on one skill or skill-series needed by several students. Materials may include texts (basal or supplemental), drill or practice materials, manipulative materials. 2. Reinforcement of skills acquired/discovery of new concepts. Materials may include manipulatives, games, tape recorders, filmstrips, supplementary texts, etc. 3. Interest groups–materials appropriate to interests and goals of students. Enhance socialization; cooperative effort toward goal.	1. Teacher directed: Teacher gives directions children take turns responding. Teacher chooses curriculum. 2. Child directed: Children use manipulative aids, games, tape recorders, etc., without teacher direction. CAUTION: games should include chance element so that all children have equal chance to win. CAUTION: groups for reinforcement or discovery should include work related to current academic objectives. 3. Interest groups–Teacher may assist students in choosing goals/curriculum. Students choose goals/curriculum.

	Frequency in Setting	Space Arrangement	Purpose/Curriculum	Teacher Behavior
Large Group	1. May vary from most of day to small portion of day. 2. Most students and teachers need variation. 3. CAUTION: Students may have difficulty attending for extended periods. Teacher proximity helps. Students may have difficulty following directions on individual basis or directions broken into steps which student performs before next direction is given. Students may need to tape lectures. Space Arrangement 1. Varies with purpose	1. Varies with purpose. 2. CAUTION:–Students with difficulty attending may best be placed close to teacher. –Students with hearing impairments best placed close to teacher. –Students with visual impairments best placed close to stimulus materials or board. –Praise student who is behaving appropriately if inappropriate behavior occurs. Catch children "being good" and praise attention to wrong behaviors; may reward those behaviors. –Provide opportunities for movement. (Think of yourself in a 50 min. lecture!)	1. To introduce new concept. 2. To stimulate discussion abilities. 3. To enhance cooperative give and take in discussion. 4. To give instructions for specific activity or to give advance organizers for day's events.	1. Teacher directed: Teacher lectures and/or demonstrates. Students listen and/or observe. CAUTION: Students should be actively engaged when possible. If teacher does demonstration, students may model teacher. 2. Teacher/Student Discussion. Teacher leads discussion, calls on students. CAUTION: Don't punish students for responding by saying they're wrong. Build on incomplete or incorrect answers. b. Vary level of questions so that all students can contribute. Students at mastery level may respond to evaluation or synthesis level questions. Students who are not at mastery level may respond to questions requiring short yes or no answers or opinions. c. Include all students in discussions. d. Tell students what you're going to say, then say it, then tell them what you've said. Probe to find out whether all students are with you; if not, vary *your* technique. e. Know student's interests so that you can make the discussion interesting to every student. If some students lose interest vary *your* discussion to include them. f. Individualized instruction *can* occur in large groups.

Handout 1

Based on the reading by Lerner develop your own definition of individualized instruction.

Is individualized instruction the same as programmed instruction?

Does individualized instruction occur only in an individual or 1-1 grouping?

During the early years of education in the United States, students attended a one-room school where one teacher taught all students, regardless of their age or educational achievement level. In some situations, all the students were taught in one large group. At other times, groups of students were taught in subgroup formations on the basis of achievement levels. Other teaching-learning situations included students teaching and helping other students in groups designed for this purpose; groups of all ages working together on topics and projects in which they were interested; students arranged in pairs; and students learning alone on individual assignments and projects. Teachers of one-room schools were forced to group students within the classroom in order to meet their diverse educational needs. Not only did they have to teach every subject to students ranging in age from six to eighteen, but they also had to accommodate instructional levels to the students' abilities, organizing different lessons for a number of groups and individuals.

The industrial revolution resulted in an enormous increase in student population, which led school systems to organize students into class groups based on chronological age. When students of the same age were placed together in graded schools, a pernicious myth spread throughout the country: Students of the same age are alike and can be expected to learn at the same rate; therefore, teachers can select a prescribed curriculum and teach all students at the same time and in the same way. As a result of this myth, the mass-teaching movement was instigated and became the prevalent mode of operation for a majority of the public school systems in the United States.

The mass-teaching movement, which is still in operation to a large extent, has many shortcomings. Some of the most relevant inadequacies now evident include mass educational methods that do not fit the needs of students in today's world. A great communication chasm exists between teachers and students and among students, because mass-teaching

from Ray H. Musgrave. Individualized Instruction: Teaching Strategies Focusing on the Learner.
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methods place a heavy emphasis on listening and writing. Students feel a personalization loss—they feel like numbers on a computer instead of feeling like breathing, living, vital human beings. Mass instructional methods relegate the teacher's role to that of being a presenter. Subject matter is structured for the average student, while the fast learner is neglected and the slow learner is eliminated.

Certainly, the one-room school is not the answer to the instructional problems that educators face in today's world, but the intra-classroom grouping procedures that allowed those teachers to meet diversified student needs can be adapted to allow today's teachers to focus on the individual learner more adequately.

For years, teachers have talked and written about intra-classroom grouping procedures, but being able to talk and to write about educational methodology is not good enough. Teaching is a performing profession, and until colleges of education incorporate performing in the public schools as an integral part of the total teacher-education programs, teachers will tend to talk and to write one game with college professors and to play an entirely different game in classrooms.

For years, school systems have grouped students for administrative and instructional purposes. The criteria and measuring schemes for grouping students into teachable units have been numerous, but regardless of which administrative grouping plan is in operation, intra-class grouping is still necessary. Merely grouping students administratively according to achievement levels in subject matter offers very little assurance that students in these groups will be alike in their social, emotional, physical, and intellectual competencies and needs, or even in their abilities to master the subject matter for which they were grouped! Administrators have attempted to solve the problem of teaching a large group of students who are different in all aspects of growth and development by placing students with similar capabilities and characteristics into classes together. But this procedure tends to confuse teachers who have been using individualized instructional practices in their classrooms, because when students are grouped administratively on the basis of likeness, teachers believe these specially grouped students are enough alike so that they can forget individualized instructional methods, and as a result they practice mass-teaching methods.

Teachers need an in-service program that helps them to implement intra-classroom grouping procedures with students in their regular classrooms. Practical suggestions for implementing intra-classroom grouping procedures will be described later in this chapter, and continuing education programs are described in Chapter 7.

ACHIEVEMENT-LEVEL GROUPS

Grouping on the basis of achievement levels is the most prevalent type of intra-classroom grouping, especially in the area of reading. In other subject matter areas, there have been isolated programs where teachers have practiced achievement grouping within the classroom. Across a broad spectrum of America, however, achievement-level grouping within the classroom is not a common practice.

By grouping on the basis of achievement, teachers do not have to teach extremely accelerated students and low-achieving students in the same group; therefore, great differences in ability to perform at a prescribed achievement level are minimized. But if assessment procedures are not administered often, and group members are not regrouped accordingly, a wide range of variance will occur within the group.

Intra-classroom achievement-level grouping is a valuable grouping procedure because it induces teachers to use formal and informal assessing instruments for measuring student achievement. As small groups of students with like abilities are formed, teachers are able to present content in relation to the students' abilities to perform. These groupings influence teachers to concentrate on student learning at different levels rather than expecting all students to attain all the content prescribed for a certain subject or grade level.

Teachers who use achievement-level grouping often think that achievement is the only basis for intra-classroom grouping. But always grouping students on the basis of achievement would be a deleterious practice, because it has certain limitations that should be ameliorated by using other types of intra-classroom grouping procedures. Dependence on achievement grouping at the expense of other types of grouping may result in a stigma's being attached to students in the low group or preferential treatment being given to students placed in the high group.

NEEDED-SKILLS GROUPS

The purpose of grouping on the basis of achievement levels is to teach members of a small group material that they can master as a group. However, a teacher who wishes to suit work to individual levels of talent still needs to regroup students on the basis of needed skills. Merely because all students in a small group have been measured as being approximately at the same achievement level in a subject, they do not necessarily need the same instruction. For example, individual students from all achievement levels may need certain map study skills in social studies; individual students in reading, regardless of their achievement level, may need to develop certain phonics skills; and certain individuals may need to develop the skill of reading for facts. There are numerous skills for students to master in all subjects, and the achievement level a particular student is supposed to have reached according to scores he has made on imperfect measuring instruments is not synonymous with the skills he has mastered—or even with what he has learned.

Using both formal and informal diagnostic instruments, individual student's needs can be determined and small groups can be formed from any whole-class group. Needed-skills grouping complements achievement-level grouping because membership in each group is different; consequently, the stigma of one's being in a low achievement-level group is decreased. And because the needed-skills grouping process focuses on individual needs while the achievement-level grouping focuses on curriculum requirements, using both groupings results in a more balanced approach to learning for all students.

One way to organize students into needed-skills groups and achievement-level groups so that both types can operate concurrently is to organize and teach each type of group on different days. If a teacher teaches more than one subject, he may organize students differently according to the subject.

Achievement-level groups and needed-skills groups can operate simultaneously. First, determine each student's achievement level and form achievement-level groups. After students have mastered the required achievement tasks while functioning as a group, then students' needed skills are diagnosed and a needed-skills group can be formed from among class members who may or may not be from the same achievement-level group. As soon as the members of the needed-skills group have mastered the skills for which the group was formed, they may return to their achievement-level group. Students should not be held responsible for learning that took place in the achievement groups while they were participating in the needed-skills group.

IMPLEMENTING ACHIEVEMENT-LEVEL GROUPS AND NEEDED-SKILLS GROUPS IN A SPELLING PROGRAM

Introduction

The accusation is made quite often by people from all walks of life that we are a nation of poor spellers. All one has to do is to observe written work in business, industry, the professions, or correspondence to realize that the "poor speller" accusation has some validity.

There are many reasons why we are a nation of poor spellers, but one of the paramount reasons is that spelling is probably the most poorly taught subject in our public schools.

If one observed a spelling lesson in a classroom in the United States each day for a week, one would more than likely see the following: On Monday, the teacher introduces the words from the basal spelling text, either by testing to see which words individual students spelled incorrectly so that they could study those words or by assigning all the students a list of words to study for the week. On Tuesday, students complete exercises from the textbook or in a workbook that supplements the textbook. On Wednesday, more exercises are completed by all students working from the same materials. On Thursday, all students review the words for the week, and on Friday, students are tested on the words for the week, and a percentage grade is placed in the grade book. An average of these grades forms the basis for reporting to parents about how well their child can spell.

Although research and experience have demonstrated that memorizing word lists does not result in one's being able to spell words needed when writing, having children memorize word lists is still the predominant method for teaching spelling. The primary reason that we are a nation of poor spellers, then, is that the public schools emphasize the teaching of word lists rather than teaching students how to spell.

Program Description

Initial steps for implementing an individualized spelling program are diagnostic steps so that teachers can find students' spelling levels and diagnose difficulties. Probably the most convenient method for finding achievement levels is to pretest students by using graded basal texts or standardized spelling tests. While the teacher is determining achievement levels, students are kept in a whole-class group, which helps the teacher to maintain discipline and establish class cohesiveness. Intra-classroom grouping will be accomplished gradually, because the social processes of grouping must be taught as diligently as the achievement task, which in this case is spelling.

A pretesting procedure will reveal that students' abilities to spell vary considerably. For example, in a third-grade class there will likely be students who are able to spell words three grades above grade level while others will only be able to spell words three grades below grade level. Even those students who are measured as being capable of spelling words on grade level are not necessarily at the same level as far as being able to spell words they need when they write.

On the basis of this pretesting program, membership for the achievement-level groups can be determined and the first group, which will be called a team, will be separated from the whole-class group. This first team may be composed of poor, average, or excellent spellers, depending on the goals and strategies of the teacher; however, this group must be taught to be a model operation that completes the prescribed task by carrying on the social processes that allow students to achieve objectives as a group.

As soon as the teacher separates the first team from the other members of the class, he will have two groups to instruct. So the whole-class group should plan together for both groups at the beginning of the period, before the two groups are separated. The planning and instructional goals for the day should be achievement-task oriented and social-behavior oriented. This planning session is extremely valuable because it prevents students from wasting time and being confused when they are separated into groups. Even more important is the whole-class evaluation session at the end of the period, when all class members are involved in the evaluation of both achievement and social objectives of the small groups.

The teacher's role for conducting the two groups simultaneously can be as diversified as his teaching plan. On different days, the teacher might conduct individual seat work with the regular class group while Team One completes a dictionary of word prefixes; Team One might take and correct a weekly post-test while the teacher teaches dictionary skills to the other class members; and both groups might complete individual seat work while the teacher conducts individual conferences concerning spelling. The teacher's role can be as diversified and creative as the individual teacher.

When two groups are operating successfully, then the third team can be disengaged from the regular class group, thus forming three achievement-level groups. Now, the teacher's role becomes more complex. Planning and conducting three teams induces teachers to use student-centric teaching methods. Consequently, students become involved to a greater extent, and lessons are planned on the students' achievement level, allowing them to accomplish tasks and experience success. The teacher's methods for grouping remain the same, but each day social processes within the group must be taught as diligently as spelling.

When teachers teach spelling to the whole group, they tend to aim the content toward the average student. So what happens when they group students on the basis of achievement? Then, teachers tend to spend more time with the low and high teams and neglect the grade-level team. But sufficient planning for each group is a prerequisite for the success of grouping. Providing for whole-group planning and instruction time at the beginning of the class period and assessment and evaluation time at the close of each period eliminates many of the problems that teachers encounter when they group students within the classroom.

One period a week should be provided for whole-group activities and games. Worthwhile activities that apply to all students include proofreading procedures, memory techniques and devices, dictionary techniques and drills, individualized spelling programs, testing and diagnosis, and all types of spelling games. One spelling game axiom is that all competitive games should be fair for *all* the game participants.

Once students have learned to reach objectives in a whole group, in a small team, and as an individual, the teacher should determine their individual needs. He should assess every need pertaining to a phase of human growth and development, including the physical, emotional, social and cognitive domains.

In the physical realm, examinations should be conducted to discover physical disabilities that might cause the student to have difficulty learning to spell. Especially important are seeing, hearing, and speaking difficulties, but other physical problems that contribute to poor spelling and other academic problems can also be diagnosed. In some cases, the physical difficulties can be remediated, but even if the problem is beyond remediation, classroom formations and teaching strategies can help students to compensate for their physical disability.

Emotional needs may be numerous and complex. A teacher's expertise in the area of psychology and psychiatry may be limited, but there are certain needs in the emotional realm that are common to all students. Everyone needs to feel liked, wanted, worthy, capable, able, trustworthy, and special as a human being, and every individual needs to have realistic goals to reach in order to experience success more often than he experiences failure. Teachers who accept themselves to the extent that they can accept students unconditionally are capable of helping students who have formed a self-concept of being inferior academically, especially those who believe they are poor spellers. When more serious emotional problems are encountered and psychological aid is not attainable, the ability to accept the student as being worthwhile, while not attempting to fit him into a preconceived mold, is more worthwhile than pseudo-psychological procedures that may do more harm than good.

To be accepted and liked by one's peers are tremendous needs that can cause students to become behavior problems when they do not receive sufficient recognition from their classmates. How students' needs in the social realm can be diagnosed and how remedial procedures can be administered will be discussed thoroughly later in this chapter.

Delving into students' needs in all facets of human growth and development allows teachers to comprehend the significance of measuring and instructing the whole child, but a fact to remember is that the primary purpose in this program is to teach students to spell. Therefore, most of the needed-skills groups will be formed from information gleaned from measuring in the cognitive domain.

General information that can provide an overview of cognitive performance in spelling can usually be found in the student's personal folder. Personal folders may be examined for IQ scores, achievement test scores, teachers' grades, health charts, and individual progress charts. All evidence found in personal folders should be kept in the proper perspective; that is, this information is only as valid and reliable as the measuring instruments used and the people who administered the tests and recorded the data. So the information is indicative, not positive; it supplies a general reference point from which a teacher may begin.

Because most individual needs in spelling are conceptual or phonetic, vocabulary and phonics tests should be administered to determine the individual needs in these critical cognitive areas.

After careful diagnosis has been made through testing and through teacher observation during spelling lessons in whole-group and achievement-level-group formation, needed-skills groups may be formed, and achievement-level groups and needed-skills groups may be rotated every other day. A needed-skills group and achievement-level groups can also operate concurrently. To illustrate: Diagnosis reveals that two students on achievement-level Team Three, two students on Team Two, and one student on Team One all miss words in context because of carelessness. After a whole-group planning session at the beginning of the period has determined goals, procedures, products, evaluation procedures, and group and individual duties and responsibilities, and after achievement-level groups are operating successfully, then a needed-skills group can be formed to teach the students to be careful. The teacher can teach proofreading skills by presenting material that the students have written and letting them underline the words misspelled. Then, when the teacher asks that these students proofread their papers for spelling errors, they will know how. As soon as the need for this group has ended, the group is disbanded and members return to their achievement-level group. Of course, instructions during the planning session should explain procedures to all class members and the needed-skills group should not be held responsible for the achievement-level group's product for the day.

A comprehensive spelling program will provide opportunities for students to learn independently. Instructional packets and independent study modules, described in Chapter 4 of this book, can be prepared for this purpose. Although teachers cannot be expected to develop programs and teach students at the same time, school systems must provide financial support for teachers to develop such materials.

One simple method for providing students with opportunities to learn to spell words they need when writing is the individualized word list method using the tape recorder as a teaching machine. With the help and encouragement of the teacher, students keep a list of the misspelled words they discover as they proofread their papers. These words may be from subject areas or personal writing (letters, diaries, notes). The word lists may also include new vocabulary words that the children would like to use in writing. The number of words per week will vary from student to student, according to the discretion of the teacher and student. One student may have a list of ten words, another may choose twenty or more.

During designated times on Mondays and Tuesdays, each student uses the tape recorder as a teaching machine. The students state their names and place numbers on the recorder, then read their words from their prepared lists. They say a word, wait long enough for the word to be written, spell the word correctly so that the correct spelling is recorded, then say the next word. During the designated time on Thursdays and Fridays, students may test themselves with the recorder, then evaluate the results. These results may be shared with the teacher and at times with a team member or members, depending on the individual student's desires and needs. Students and teacher keep a record of words learned for the year, and special emphasis is placed on the correct spelling of these words in all writing activities.

Although this is a description of a spelling program, the methodology is generic, and the strategies and techniques can be used for other subjects and at every grade level. Strategies and techniques that focus on the learner are as essential to a mathematics instructor in high school as they are to an instructor of a group of third-grade students learning to spell. Achievement-level grouping and needed-skills grouping are procedures that help teachers to focus on student learning; however, other bases for grouping should be used to augment these grouping procedures.

INTEREST GROUPS

Students of all ages have a variety of academic interests, not only in different subjects, but also within the framework of the various subjects. When students are involved with an interesting and exciting learning task, they are more willing to attempt and complete it; therefore, more real learning takes place.

Grouping on the basis of interest allows students to research topics from a variety of sources, to report findings to small and large groups orally or in writing, and to organize and develop individual and group projects as they learn to cooperate with other students in a team operation. Interest grouping offers a change from achievement-level grouping and allows the students to choose the group they want to join without any pretesting or teacher manipulation. Thus the stigma of being placed in a low group or the deleterious effect that may occur from being placed in an average or high group is nullified. Grouping on the basis of student interest is democracy in action, because the teacher and students are cooperating, planning, implementing, and evaluating together to accomplish individual and curriculum goals and objectives.

The roles of teacher and students change dramatically when a class switches from a situation where the teacher is a presenter-competitor-tester and students are listeners, note-takers, and test-takers to one where the teacher is leader-catalyst-motivator and students are participators, producers, and evaluators.

Interest groups may be formed on the basis of interest in a particular topic, interest in a task concerning the topic, or interest in both the topic and the relevant task. When a class group is learning about Mexico, for example, interest groups may be formed around such topics as tourists' spas, various cities, illicit drug farming and smuggling, industries, recreation, and Mexican peasants. Of course, this is a partial list, and the topics on Mexico could be as diverse as the students themselves. Groups may also be formed on the basis of interest in tasks, with students selecting the tasks that interest them. A partial list of tasks includes doing research and making reports, making real object displays and giving reports, preparing art and bulletin board displays and group reports, preparing media presentations, and preparing special projects and giving reports. Making the interest group topical or task-oriented is not as important initially as allowing students to choose the group they are interested in.

A rather unique way to organize students into interest groups uses interest stations. Three or four interest stations may be set up around the room for the purpose of teaching the same concept or skill, but each station employs a different

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strategy for teaching and learning, and the student selects the station in which he is most interested.

Say that the skill to be taught is to find the main ideas of paragraphs in a particular story. One station would include an overhead projector and screen. A student operator would show transparencies of the story, and students in groups would identify and record the main ideas of the paragraphs. Then the students would defend their choices to other students in their group.

Another station might include a tape recorder and earphones. Students would listen to paragraphs and write down the main ideas. Then they could check their individual answers against a mimeographed answer key.

A third group may be working with the teacher. He asks multiple-choice questions concerning the main ideas from a book, then the students pick the right choice and defend it.

As a follow-up activity for evaluation, the whole class could play a main-idea game. The object of the game is to select the correct main idea from a list of suggestions in order to learn a secret message. Each suggestion has a code number that supplies a message, but only the correct suggestions have code numbers that will supply part of the secret message. As students find the secret message, they write down clues to help others; thus, students are allowed to help other students.

Interest stations can also be used to teach different concepts or skills. At the close of the class period, each group can share with the rest of the class the information it learned at its interest station, or students may rotate from one station to the next.

Because interest stations are formed to teach subject-matter concepts and skills, the stations are subject-matter oriented, and the selections that students make are really choices of how they choose to learn. Student interests should definitely be kept in mind when stations are being built and materials are being chosen. Interest stations usually exist for only a day or two because the reason for their existence will expire, although the technique may be used again at another time.

Interest centers are semi-permanent areas that are stocked with material covering a specific topic or subject. Interest centers are topical or subject-matter oriented. For example, a teacher might set up a creative-writing center or a math-activity center. Students are allowed to spend time in interest centers, developing projects or merely engaging in the activities that the center provides. An interest center should be in operation only as long as it offers a real learning experience for enough students to justify its existence. Interest-center participation should be as important to the teacher and students as anything else they do during the school day.

Interest groups, interest stations, and interest centers offer teacher and students a respite from lectures, recitation, and assigned seat work study. Of course, because students have different learning styles, a variety of techniques and methods are necessary to enable teachers to reach more students, but every method must be based on sound principles of learning. During interest-group participation, the students are engaged in an active process. What they learn is meaningful, useful and interesting to them, and the focus is on the individual.

Teacher-student planning, learning by the discovery method, and evaluations based on performance and product are integral components of interest-group methodology. During the planning sessions, when goals and objectives are formulated and evaluative instruments and techniques are discussed and adopted, everyone involved should understand that interest-group activities and products must lead toward fulfillment of what is to be learned.

SOCIAL GROUPS

In the past, teachers have been exposed to a considerable amount of sociometry. The purpose for studying the science of human relationships and conditions is to help teachers improve students' interpersonal relations in the classroom.

One does not have to be a prominent student of sociometry to practice social grouping in the classroom; however, a teacher should know how to place students on a sociograph and then plot a sociogram before he attempts to group students for social purposes. Although teachers can get an idea of students' social preferences by observing them carefully as they choose partners for work or play, observation does not supply teachers with such valuable information as the social position of each member of the class in relation to all other members—the in-groups, cliques, and rivalries within the class. Most of all, observation will not give enough teachers pertinent information for arranging students into social groups that will improve the social conditions in the classroom.

To secure data for a sociogram, the teacher asks students to designate the students with whom they would most want to work in small groups. The students place first, second, and third choices on a piece of paper. Students should be assured that other class members will not see the names that they select.

A sociograph tabulation is a good way to begin analysis procedures. A sociograph is a simple chart with each pupil's name listed horizontally and vertically. The horizontal column is used to designate each student's first, second, and third choices, and the vertical column is used to tabulate the score each student made by being chosen.

To plot the sociogram, teachers compute the total scores made on the sociograph and use the names of the high-score students as central points. Arrows designate the students' choices. Two arrows connecting students but pointing in opposite directions designate mutual choices.

The pertinent sociometric date enables the teacher to minister to the social needs of individual students. But it is important to remember that social patterns may change dramatically during a period of a few weeks, so sociometric data should be updated periodically to be meaningful. Students should be allowed to work with partners they choose themselves before teachers begin to manipulate them to achieve desired growth.

At times, groups may be formed specifically for social goals, but having sociometric data at hand will help the teacher anytime he groups. It is especially helpful when teachers group for special purposes, such as problem solving, teacher aid, and committee work.

SPECIAL-PURPOSE GROUPS

At times, groups are formed to accomplish a specific purpose. Special-purpose groups may be based on achievement levels, interest, sociality, or needed skills. But regardless of the basis for group membership, the primary reason for forming special-purpose groups is to achieve a specific goal.

Many groups qualify for the special-purpose category. The number and types used depend on the purpose of the teacher and the needs and skills of the students. Following are descriptions of some of the most commonly used special-purpose groups:

Class Committees. A class committee may be formed to plan, collect, and administer a class library of books, magazines, tapes, and other resources obtained from outside sources. Other class committees may involve students in class government, bulletin board planning and construction, field trip planning, interest-center constructions and maintenance, or even class and playground maintenance.

Polar Groups. Polar groups are composed of students who are opposites in some way. Students who can comprehend the subject matter are grouped with students who are having difficulty learning. Students who have mastered a skill are grouped with students having difficulties. Students who work well with others are grouped with students who do not; or students who are dependent are grouped with students who are independent. Polar groups offer the best grouping arrangement for having students teach each other.

Pairs. Many class activities can best be accomplished by students working in pairs. Pairs may be formed on the basis of any grouping procedure. Students grouped in pairs bridge the gap between independent study and groups of four or five, because social tasks that students and teacher must learn together are not as complex when students work in pairs.

Teacher-Aide Groups. Teacher-aide groups aid the teacher in the classroom. Functioning as an instructional team in cooperation with the teacher, teacher-aide group members become a part of a team-teaching operation. Teacher-aide groups may also be used to construct or prepare instructional materials and to operate learning stations and centers. Serving as a teacher-aide group member is a real learning experience; however, certain students should not be relied on to perform teacher-aide duties to the extent that these duties jeopardize their roles and duties as students.

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Discussion Groups. Whole-class discussion, small-group discussion, round-table discussion, panels, symposiums, sociodramas, and strategies and techniques for organizing discussion groups and teaching discussions were discussed in detail in Chapter 1.

IMPLEMENTING INTEREST GROUPS, SOCIAL GROUPS, AND SPECIAL-PURPOSE GROUPS IN AN AMERICAN HISTORY CLASS

Introduction

History is a subject that is especially designed for creative, innovative teaching strategies and techniques. It is not a subject for passive learning whereby students are required to listen to lectures, take notes, and prepare for examinations. Students should be able to relive the past in exciting, interesting ways, using multiple resources so that they can apply what they learn to the present and future.

Although basic knowledges should apply to all students, these basic knowledges should serve as a springboard for students to range in many different directions. Students who are forced to learn history from one textbook or one lecturer may glean as much misinformation as they do factual knowledge. Students should be allowed to explore history from a wide variety of sources and situations so that they gather knowledge, develop understanding, and form generalizations from their own frame of reference.

The teaching of history offers a great opportunity for teachers to use all types of intra-class grouping procedures, but it is especially appropriate for whole-group activities, interest and social group activities, and grouping for special purposes.

Program Description

For a unit on the Second World War, the Pacific Theater, students would need basic information that could be taught best in a whole-group formation. Basic information that is necessary for all students serves as an introduction to the topic. Rarely does one find students expressing great interest in a topic before they have had an opportunity to acquaint themselves with it. A variety of techniques should be used to present the basic information in order to motivate students and to build readiness for, and interest in, the group work to follow.

One instructor conducted whole-group instruction in this manner: He announced to each class that there would be no written examination if the one hundred and twenty students in his four classes would bring souvenirs to make the room appear to be a museum for the topic to be studied.

Basic information was provided from a narrative film plus the instructor's personal experiences. His personal-experience narrative was expanded and illustrated by teacher-aide groups who prepared background decorations and drawings. Another teacher-aide group prepared a summary of basic material from three textbooks, compiling the different views and facts. Students could hear the compilation on tape, read a handout, or read the information from the original sources. The teacher-aide groups were composed of student volunteers, who prepared the materials with the teacher's direction, help, and advice.

Separate teacher-aide groups can be selected for each class or one group can have members from different classes. After the materials have been used, the best ones should be kept for the following years in case the same idea is used again. However, the materials should be revised and refined by the teacher and student groups.

Sufficient time for basic learning for all students in a whole-group formation should be provided. Some teachers like to allocate a part of each day to whole-group teaching; others prefer to use that method during the entire class time for two or three days.

Teacher-guided student planning and evaluating sessions are essential to the success of any grouping procedure. Most time will be spent on planning and evaluating when beginning and ending a topic, but some planning and evaluating should occur daily. The type of student involvement that leads toward the accomplishment of specific goals and objectives is not automatic. Students have to learn how to plan and evaluate. If the teacher doesn't teach the necessary procedures, the students may engage in irrelevant activities that do not lead to real learning.

The first planning session is vital to the success of the remaining sessions. During that session, the teacher should have students write lists of questions about the topic and then set up activities that will provide the answers to the questions. With the teacher's direction, students set up interest groups concerning the problems.

The class studying the Second World War, Pacific Theater, listed problems and formed interest groups as follows:

1. One group was formed because class members chose to research the war at sea. This group divided into two subgroups. One group was to use a large-scale map and pin-on ship models to present the strengths and weaknesses of the ships involved in the various battles. The second group was to write biographies of the major naval leaders on both sides and act out the parts of the characters on videotape.
2. A second group chose the land war and planned to use a newscast approach for reporting. The students divided into two subgroups, to describe the battles of the army and the marines. One group would report the army maneuvers and then the scene would switch to the group reporting about the marines.
3. A third group chose the problems on the home front. One subgroup was to cover governmental problems; the other, people problems. Both subgroups decided to present "You Are There" skits for reporting purposes.

The teacher consulted sociometric data to form these groups, and students agreed that a five-second time limit for getting into the groups and starting group activity was reasonable.

The students set a time limit of three days for preparation. At the end of that time, each group was allowed one day for reporting. Goals and objectives were set for each of those days, and achievement and social tasks were evaluated at the end of each day. Two final days were spent summarizing the unit and evaluating student learning. The entire unit consumed eight days of instructional time. (Although total time spent on this particular unit was almost two weeks, some teachers prefer to organize interest groups for only one or two days. The amount of time one spends in interest groups depends on the students, the situation, the subject matter, and the teacher.)

The culminating activity for this unit also served to evaluate students. Each group constructed a lottery-type cage or barrel from which questions could be drawn. With the teacher's direction and aid, the members of each group wrote eighteen questions that applied to their topic, including an equal number of questions. The instructor added to each group's barrel the fifteen questions that had been listed by the whole group during the preliminary planning session. While one student acted as monitor and evaluator at each station, groups of students rotated from barrel to barrel, drawing questions and answering them. On the last day, all the questions were put into one barrel and students came to a central location to draw and answer questions as the teacher kept score.

During whole-group activities, the teacher was planner, presenter, group leader, motivator, helper, and evaluator. In the group formation, his role was to supply pertinent information or to explain where the information could be located. He gave advice and provided direction for some groups. He asked questions and answered questions for group and individual improvement. He helped groups to organize their time and effort so that they could reach the instructional goals for the day. All the time, the teacher's personality and behavior established the tone for group and individual participation and behavior. As soon as groups formed, the teacher made a fast tour to each group, answering and asking important initial questions and establishing a businesslike atmosphere. He was careful to avoid spending too much time with any one group. The second group-to-group tour was also fast, but the teacher's questions were more penetrating, and praise and encouragement were administered to deserving students. If an individual or group was accomplishing an achievement or social task in a way that would benefit the whole class, the teacher called "time-out" to explain and to discuss the technique or point. Soon the teacher could take more time with each group; however, he was careful not to become too involved with any one group.

When the students returned to whole-group formation, they evaluated themselves and their group on the basis of achievement and performance of social tasks. Students discussed the things individual members of their subgroup had done that had helped them to achieve their goals and the things that had hindered them from accomplishing their goals as a group. Individual and group evaluations were tabulated and file reports were placed in group and individual folders. Evaluation was continual: students and teachers evaluated during the class and tabulated and filed data at the close of the day. Evaluation was comprehensive: learning goals and stated behavioral objectives formed the foundation for evaluation, and activities and learning tasks led to the fulfillment of these goals and objectives.

Although this particular example does not use the interest-station or interest-center format, the use of those grouping procedures adds variety to teaching methodology. Teachers may also wish to involve students in individual projects that they can complete outside the classroom to supplement what they have learned during class time.

SUGGESTIONS FOR EFFECTIVE GROUPING

Have a reason for grouping. If the lesson or activity can be taught just as well in a whole-group formation, why group?

Have stated goals and instructional objectives for students concerning what is to be taught and learned, and then be certain that group activities lead to the fulfillment of these goals and objectives.

Keep a whole-group formation until discipline has been established. Do not subgroup until you know students' needs, work habits, behavior patterns and abilities.

Ease into group work. Make one group a model operation before forming other groups.

Begin group work with simple problems before starting long-term group work.

Have from two to five members in a group. Any number over five usually constitutes too large a group.

Teach grouping directly by asking students to evaluate their groups. Ask group members to record and report those actions of group members that led toward the achievement of the goals of the group and those actions that hindered the group in achieving its goals. Teach appropriate roles for group members and list skills in group procedures. The listed skills may be revised into an evaluative checklist for teacher and student use.

Start and close each day's lesson with students in a whole-group formation.

Maintain a businesslike atmosphere. Have high expectations for individuals and groups.

Reward desirable behavior with deserved praise and encouragement.

Help students to set time limits for getting in and out of groups in a responsible manner. Estimated time allotments for the completion of tasks should be agreed on.

Task assessment should be practiced daily during whole-group evaluation at the close of the period. Students should not be allowed to space task responsibilities over a two- or three-day time period.

Let group membership roles emerge from the group. During evaluation, call attention to the different roles played by group members. Point out that students play many roles during group activity and that students must play different roles as the group matures in order for the group to function effectively.

Vary the types of groups. Do not become dependent on any one type. Remember that the whole class is also a group.

Be an active participant in group activities by asking questions, offering suggestions, providing aid and encouragement, and helping students with needed skills so that their product or presentation will live up to their expectations.

Have equipment, materials, and research resources ready before groups are formed.

Use students as teaching aides. Individual students may instruct group members while the teacher acts as a team leader, or teacher-aide groups may instruct in a cooperative effort with the teacher.

Provide students with accurate feedback by using audio and video tapes of group participation so that students can critique and evaluate group behavior.

Prepare evaluative instruments with students. Checklists, rating scales, achievement-task evaluations and formal tests and measuring instruments should be chosen or prepared as a class project.

Have personal evaluative conferences with individual students. Allow the student to self-evaluate using the teacher evaluation as a reference point.

Place each student in the type of group for which he is best suited.

Have students set noise level for group activity. The teacher should model the desired noise level.

Try the certificate rewards system for improving social behavior. Give certificates to groups having the highest rating for the week. Other certificates may be given to the best individual members, most improved group and class member, most creative group and class member, and so on. The most important point to remember when teachers use extrinsic rewards is that the intrinsic feelings students experience are more important than the award.

Intra-classroom grouping procedures help teachers to focus on the learner by placing students in different types of groups designed to minimize the students' differences, resulting in a more individualized teacher-learner situation. Intra-classroom grouping of students does not completely individualize instruction for students, but if it is done carefully, it is an important part of individualized instruction.

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Handout 2

Define the following:

Achievement level groups

Needed skills groups

Interest groups

Social groups

Special purpose groups

Reading 4

Grouping Students by Interest, Social Preferences, or Special Purposes

P. Jeannie Kleinhammer

Both handicapped and non-handicapped students bring a variety of interests, needs, and abilities to the regular class setting. Often, however, students are grouped only by ability across subject areas or by needed skills in a particular subject areas, e.g., Dolch sight word recognition in reading. While teachers may find such groupings convenient for instructional purposes, the student who is placed with the same classmates for extended periods of time is subject to stigma, boredom, and frustration. Further, the student who is always placed in the "Jet" reading group or the "Advanced British Literature for the Very Very High Achievers" group may be deprived of learning from the variety of social, cultural, and learning backgrounds which his or her peers bring to the classroom. The same student may also be deprived of learning to value the unique talents or interests which his or her classmates, handicapped or non-handicapped possess. Thus, within the regular classroom, excellent students may continue to improve their academic skills be being placed with the "Jets" but may fail to develop to full potential their appreciation of and ability to interact with peers who exhibit different talents, interests, or abilities. Implications for the handicapped students are more obvious

Grouping students according to interest in a common task or to complete a special assignment provides one means of providing instruction to and social interchange among students with a wide range of ability. For example, a group of students assigned to complete a project in language arts might consist of a cerebral palsied student who is wheelchair bound but who has creative verbal ability, a second student who has some art ability, and a third student who is somewhat shy but reads quite well. Using the combined talents of these three students, the language arts teacher might assign the task of writing a short story. The cerebral palsied child would dictate the text to be transcribed and illustrated by the student with artistic skills and proofread by the student with high reading ability. By so using the skills of these three students the language arts teacher could accomplish both social and instructional objectives. The artistically talented student would use listening comprehension to create illustrations which accurately portrayed the story. The shy, good reader would be asked to interact with the group to provide feedback on the proofreading task. The cerebral palsied student would be asked to interact as well as to evaluate and correct his or her creative work on the basis of the proofreader's comments.

While use of such groupings is conceptually attractive and offers the potential for stimulating social interactions among students of diverse interests and abilities, careful planning is critical to the success of interest or special purpose groups. The following guidelines may be helpful in initial planning:

1. The teacher should have specific instructional and/or social goals in mind for each student who is to participate in the activity.

2. Careful assessment of each student is critical; while the task should be challenging, social interactions will not be enhanced if one or more of the students cannot meet the task demands of his or her role.

3. Guidelines for appropriate behavior may need to be firmly established and contingencies set for students who are disruptive to group members or to other class activities.

4. The teacher should be flexible and sensitive enough to ongoing group interactions to permit independent work when possible, but to intervene when necessary. Interventions may need to include withdrawing a student from the group temporarily, disbanding the group, providing assurance to a student who has social or task difficulties, or providing assistance for completion of the task.

With these guidelines in mind and with instructional and/or social goals clearly delineated, the creative teacher can find interest groupings to be a challenging and stimulating way to break the monotony of always being a "Jet"!

Lecturing

Lecturing is much misunderstood and much maligned. Yet, when done correctly, it is quite helpful to students and is appreciated by them. Lecturing's negative connotations have arisen through misunderstanding about how and when to use the technique.

Basically, lecturing is a presentation activity with attention focused on predefined content. It usually involves several teaching skills: set induction, closure, reinforcement, use of questioning techniques and varying the stimulus. Although the teacher plays the dominant role, there are opportunities for student participation.

Lecturing is useful for the following teaching objectives:

1. **Lectures convey information.** This is especially true with information not otherwise accessible to students. For example, a lecturer may have access to books, articles, people or places (those visited on sabbaticals, leaves of absences, etc.)

2. **Lectures review and reinforce previous work.** The teacher's unique way of reviewing can reinforce student understanding of material through simple review or repetition of main points. Reviews provide the teacher opportunities to bring in more examples, references, anecdotes, etc.

3. **Lectures synthesize many sources.** Through synthesis, teachers can save students time and trouble required to read all available sources and can convey information not otherwise available. Synthesis provides students an overview or general insight into topics which otherwise might come very slowly from extensive reading of available sources.

4. **Lectures convey enthusiasm.** This touches on the techniques of set induction. The lecture itself, primarily a one-way presentation from teacher to student, can be an exciting introduction to material or an exciting presentation of material in its entirety. A stimulating presentation will reinforce students' understanding of what they already know and motivate them to delve further into a subject.

Lecturing, then, is a way of presenting material in an interesting and motivating manner, when acquisition of information is a primary objective. Because lecturing is a one-way activity, students are necessarily going to be rather passive. Thus, when the goal of the lesson goes beyond acquisition of information and seeks to get the student involved in learning, the lecture must be complemented by other activities. Then, the lecture introduces and is followed by activities in which the learner takes part actively—discussions, laboratories, writing papers, field trips, etc. The reason: for a person to learn anything, he must become involved with it. For example, if a person wants to play golf, he must play golf. He cannot read about golf and expect to become a good golfer. In

McKnight, Schich, Cleaver (1975) *On Teaching*. Reproduced by Permission of Author.

a similar way, a teacher cannot simply lecture about good writing. Students must be given the opportunity to write.

To enable students to reach established lesson goals, lecture plus complementary teaching methods may be useful for the following activities:

1. When instructional goals involve the application of skills.
2. When instructional goals involve changing of attitudes or behaviors.
3. When information presented is to be retained by students for a long period of time.
4. When lecture material is very complex or abstract. Students may need an opportunity to apply it and use it so they can learn the higher order relationships of the materials.

Characteristics of an Effective Lecture

In planning a lecture, a teacher should consider several points.

One significant concern is the disposition of the audience—the listeners' abilities, interests, personalities and motivations. Verbal communication must be interesting and understandable. A vocabulary appropriate for college freshmen may need adjustments to students of graduate level. Anecdotes too, may differ. Motivation for students in general chemistry may be markedly different from that of the student preparing for medical school.

Another audience consideration relates to the effect of the time of year or time of day on the student's propensity to listen. The temper of a classroom the day before a mid-term exam may differ from that the day after a long vacation. Such information needs to be acknowledged in planning the length of a lecture, the amount of material to be covered, and the degree of difficulty.

A third aspect considers the pace of the lesson. The lecture should include periodic pauses for students to assimilate information, revise notes or ask questions. While preparing the lesson plan, a teacher should consider when to vary the stimulus. This change of pace may simply be a variance in pitch, loudness, intensity or speed of delivery. Or change may extend to the use of visual devices such as blackboard, overhead projectors, films or film-strips.

With regard to the speed of delivery, while presenting a particularly difficult concept, the lecturer may slow down the presentation. During review, material may be skimmed at a fairly rapid pace.

Lecture length needs consideration. Even a good lecturer with an interesting topic tends to take too long. The attention span of most adults is about 20 minutes, so that in addition to pacing the lecture, a pause after about 20 minutes should be allowed. Lectures should be kept fairly short—from 30 to 40 minutes at the most. Learning begins to diminish after 15 minutes, and in about 45 minutes interference occurs and the learner may begin to lose much of what was acquired earlier without carefully taken notes.

Perhaps, the simplest test of lecture appropriateness asks whether or not the subject matter could have been presented more efficiently and usefully in a book or in some other manner.

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Confrontation: Special Education Placement and the Law

Abstract: Recently, suits have been brought against public schools for placing certain children in special classes for the educable mentally retarded. Through the courts parents are challenging the administration and use of standardized tests, placement procedures, and the effectiveness and the harmful impact of special class programing. Special educators are urged to initiate immediate reform in testing and placement procedures or there is a likelihood that changes will be imposed by the courts. The possibility of punitive damages may stimulate these changes.

In the nation's public schools, classes for the educable mentally retarded have unwittingly become burial grounds for many children from environments that have not prepared them for the demands of the schools. The educational system has consistently ignored pleas for change to make school experience more relevant to children who may be neither highly motivated nor achievement oriented or who come from culturally different backgrounds. In an effort to make the educational system reponsive to the children's needs, concerned parents have turned to the courts. In recent years a groundswell of litigation has arisen, attacking the criteria currently used to label and place children of racial and cultural minorities in special programs. Such intense judicial activity has important implications for educators concerned with the seriousness of the present situation and highlights the need for immediate change.

The Arguments

The following arguments are levied most often against current placement procedures.

For many children, testing does not accurately measure their learning ability. Intelligence tests are generally standardized on white, middle class student populations, are heavily verbal, and contain questions more easily answerable by white, middle class students. These three factors coalesce to produce IQ scores which are based primarily on cultural and/or socioeconomic backgrounds of the students and are not a true indication of learning ability. The tests discriminate against children of racial and cultural minorities and are therefore in violation of the equal protection clause of the 14th Amendment to the United States Constitution.

The administration of tests is often performed incompetently. Even if proper testing instruments existed, many of the present public school personnel are not adequately trained to administer the tests nor qualified to interpret the results prop-

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erly. The skilled tester must be aware of the cultural backgrounds of the children and be alert to the anxiety created by the testing situation and to any inability to understand directions because of language problems. Hence, an examiner technically may be able to administer a test and yet obtain results which are not an accurate indication of the child's abilities.

Parents are not given an adequate opportunity to participate in the placement decision. Most school codes require that the parents be notified when the decision to place the child has been reached, and some codes require that a hearing be held before placement. However, parents often are not notified when their children are placed in a special class and are almost never given a formal opportunity to be heard before the placement decision is reached. When parents are involved, it is usually in an effort to obtain their agreement to a decision which the professionals have already made.

Special education programing is inadequate. Once a child is placed in an educable mentally retarded class, there is little chance that he will leave it. Insufficient attention is given to the development of basic educational skills and retesting occurs infrequently, if ever. Contributing further to the lack of upward mobility is the student's poor self image which is reinforced by such placement and contributes to the self fulfilling prophecy of low achievement.

The personal harm created by improper placement is irreparable. Special class placement becomes a basic factor in a self fulfilling prophecy, frequently relegating the victim to an economic, educational, and social position far below that which he has the ability to achieve. The social stigma surrounding the label "mentally retarded" remains with the individual his entire life. Obtaining a job may be difficult if not impossible, and even if adequate employment is found, the psychological damage created by improper placement persists.

The Developing Case Law

The following cases form the nucleus of the growing body of case law in the area of special class placement.

Culture Biased Tests

In *Hobson v. Hansen* (1967) Judge Skelly Wright held that the "tracking" system of educational placement in the Washington D.C. public schools was illegal since it was a violation of the equal protection clause of the United States Constitution. He therefore ordered the abolition of the track system. Under this system students were given the *Sequential Tests of Educational Progress* (STEP) and the *School and College Ability Tests* (SCAT) in the fourth grade and the *Stanford Achievement Test* (SAT) and the *Otis Quick-Scoring Mental Ability Test* in the sixth grade. The students were then placed in an honors, general, or special (educable mentally retarded) curriculum primarily on the basis of test scores. Judge Wright found that in the Washington D.C. schools there were a disproportionate number of black children in special classes and attributed this inequitable distribution to culture biased tests:

> The evidence shows that the method by which track assignments are made depends essentially on standardized aptitude tests which, although given on a system-wide basis, are completely inappropriate for use with a large segment of the student body. Because these tests are primarily standardized on and are relevant to a white middle class group of students, they produce inaccurate and misleading test scores when given to lower class and Negro students. As a result, rather than being classified according to ability to learn, these students are in reality being classified according to their socio-economic or racial status, or —more precisely—according to environmental and psychological factors which have nothing to do with innate ability [p. 514].
>
> The chief handicap of the disadvantaged child where verbal tests are concerned is in his limited exposure to people having command of standard English. Communication within the lower class environment . . . typically assumes a language form alien to that tested by aptitude tests [p. 480].
>
> Other circumstances interact with and reinforce the language handicap. Verbalization tends to occur less frequently and often less intensively. Because of crowded living conditions, the noise level in the home may be quite high with the result that the child's auditory perception—his ability to discriminate among word sounds

> —can be retarded. There tends to be less exposure to books or other serious reading material—either for lack of interest or for lack of money [p. 481].

Once in a certain track the student is locked in because of infrequent retesting, the student's poor self image, and the teacher's preconceived ideas of the student's academic abilities. Judge Wright noted:

> The real tragedy of misjudgments about the disadvantaged student's abilities is, as described earlier, the likelihood that the student will act out the judgment and confirm it by achieving only at the expected level. Indeed, it may be even worse than that, for there is strong evidence that performance in fact declines . . . . And while the tragedy of misjudgments can occur even under the best of circumstances, there is reason to believe the track system compounds the risk [p. 491].

Therefore, relying on *Brown v. Board of Education* (1954), the court held that the tracking system and its methods irrationally separate students on the basis of race and socioeconomic background and thereby violate their right to an equal educational opportunity. On appeal, the District Circuit Court of Appeals in *Smuck v. Hobson* (1969) affirmed the lower court's decree abolishing the track system.

Discriminatory Interclass Grouping

Since *Hobson*, California has become the battleground over intelligence testing and educational placement. On January 22, 1970, *Spangler v. Board of Education* (1970) was decided in the United States District Court for the Southern District of California. The court found that there was a "racial imbalance" in the student bodies and faculties of the Pasadena school district at all levels. It attributed the racial imbalance to conscious policies and practices on the part of the school district to maintain disproportionate racial distributions. One such practice was discriminatory "interclass grouping" based upon intelligence tests and teacher's recommendations. Without contest by the defendant, it was admitted that the intelligence tests used were inaccurate and unfair:

> The racial effect of the grouping procedures generally in use in the District is to increase segregation. At every secondary school a higher percentage of Black than white students is in slow classes in every subject matter, and a higher percentage of white than Black students is in fast classes . . . . The racial segregation that exists within integrated schools as a result of interclass grouping doubtless has numerous causes, not all of which are treated in the record. . . . One is that grouping assignments are based in part on scores obtained on achievement and "intelligence" tests. As the District's Assistant Superintendent for elementary education acknowledged, such tests are racially discriminatory, based as they are primarily on verbal achievement [p. 159].

Language Barriers to Adequate Performance

In *Diana v. State Board of Education,* filed in the District Court for the Northern District of California in February 1970, nine Mexican American public school students, ages 8 through 13, claimed that they had been improperly placed in classes for the mentally retarded on the basis of inaccurate tests. Each plaintiff came from a family in which Spanish was the predominant or only spoken language. In the first and second grades the children were given the Stanford-Binet and Wechsler intelligence tests. On the basis of IQ scores so derived, they were placed in educable classes. The plaintiffs argued that (a) the tests relied primarily on verbal aptitude in English thereby ignoring learning abilities in Spanish and (b) the tests were improperly standardized by testing only white, native Americans and therefore related in subject matter solely to the dominant white, middle class culture. This inherent culture bias discriminated against the Mexican-American plaintiffs.

Citing *Brown v. Board of Education* (1954), the Civil Rights Act of 1964, and Article 9 Section 5 of the California Constitution, the plaintiffs contended that the Federal government and state of California guarantee every citizen the right to an equal educational opportunity. The case was settled in February 1970 by a stipulated agreement which set forth the following practices to be observed in the future.

1. All children whose primary home language is other than English must be

tested in both their primary language and English.

2. Such children must be tested only with tests or sections of tests that do not depend on such things as vocabulary, general information, and other similar unfair verbal questions.
3. Mexican-American and Chinese-American children already in classes for the mentally retarded must be retested in their primary language and must be reevaluated only as to their achievement on nonverbal tests or sections of tests.
4. Each school district is to submit to the state in time for next school year a summary of retesting and reevaluation and a plan listing special supplemental individual training which will be provided to help each child back into the regular school class.
5. State psychologists are to work on norms for a new or revised IQ test to reflect the abilities of Mexican-Americans so that in the future Mexican-American children will be judged only by how they compare to the performance of their peers, not the population as a whole.
6. Any school district which has a significant disparity between the percentage of Mexican-American students in its regular classes and in its classes for the retarded must submit an explanation setting out the reasons for this disparity.

In February 1971, *Covarrubias v. San Diego Unified School District* was filed with the Federal District Court for the Southern District of California on behalf of 12 black and 5 Mexican-American pupils in classes for the educable mentally retarded. The plaintiffs rely on the attack in the *Diana* case on the culture bias of the Stanford-Binet and Wechsler intelligence tests and the resultant denial of the right to an equal education. In seeking money damages under the Civil Rights Act of 1871, they argue that the defendant school district, its officers and agents, conspired to deprive plaintiffs of the equal protection of the laws. In addition, an injunction is sought to prohibit the continuation of special education classes in San Diego until valid testing methods are devised and correctly administered.

Though *Covarrubias* resembles *Diana* in the legal arguments presented, two significant differences are apparent. First, *Covarrubias* introduces money damages as a possible remedy under the Civil Rights Act of 1871, though the elements of conspiracy may be difficult to prove. Second, any revision of current testing methods based on *Diana* must also recognize the cultural influences of the ghetto environment in determining a student's learning ability.

Parental Participation and Prior Hearings

In 1968, 11 Mexican-American public school children, ages 5 through 18 years, filed a complaint *(Arreola v. Board of Education)* in the Superior Court of Orange County, California, seeking an injunction to prohibit the continuation of special classes for the educable mentally retarded until the following reforms are instituted: (a) a hearing is provided before placement as required by the due process clause of the 14th Amendment to the United States Constitution and Article 1, Section 13 of the California Constitution, (b) the IQ tests used to determine placement must recognize cultural differences among students in general and the Mexican-American plaintiffs in particular; and (c) the classes for the mentally retarded provide an educationally meaningful curriculum and periodic retesting.

After *Diana* the plaintiffs' request for more appropriate testing methods appears to be moot. The real thrust of *Arreola* is its demand for parental participation in the placement decision. Before the decision to specially place a child has been made, the parents must be notified and given a formal opportunity to challenge placement. The plaintiffs' argument for a due process hearing was supported by the United States Supreme Court's ruling in *Wisconsin v. Constantineau* (1971). The Court held that a Wisconsin law requiring the posting of the names of alleged problem drinkers in taverns and package stores for the purpose of preventing the sale of liquor to them constituted stigmatization serious enough to require prior notice and hearing before posting. Justice Douglas writing for the Court found the Wisconsin practice to be a violation of the due process clause of the 14 Amendment:

> Where a person's good name, reputation, honor or integrity are at stake because of what the government is doing to him, notice and an opportunity to be heard are essential. "Posting" under the Wisconsin Act may be to some merely the mark of illness; to others it is a stigma, an official branding of a person. The label is a degrading one. . . . Only when the whole proceedings leading to the pinning of an unsavory label on a person are aired can oppressive results be prevented [p. 4129].

In educational placement litigation, the plaintiffs are arguing that the label "mentally retarded" is a stigma, "an official branding of a person," the imposition of which requires notice and a prior hearing.

Compensation for Damages

In Boston, *Stewart v. Phillips* presages the most far reaching revision of current testing methods. The complaint was filed in the Massachusetts Federal District Court in October 1970 and delineated three classes of plaintiffs: (1) all poor or black Boston public school students who are not mentally retarded but have been improperly placed in special classes for the mentally retarded; (2) all poor or black students who are mentally retarded and have been denied placement in educational programs created for their special educational needs; and (3) all parents of students placed in classes for the mentally retarded in the Boston public schools who have been denied opportunity to participate in the placement decision. The class (1) and (2) plaintiffs argue that the improper placement of students who are poor or black on the basis of tests which do not accurately measure the learning ability of these students and the denial of educational programs for their specific educational needs abridge their right to the equal protection of the laws as guaranteed by the 14th Amendment. Class (3) plaintiffs argue that the denial of the opportunity to be heard in relation to the placement of their children in classes for the mentally retarded deprives them of their right to due process of the law in violation of the 14th Amendment.

In so arguing, the plaintiffs seek $20,000 each in compensatory and punitive damages and ask that no student be placed in a special class until a "Commission on Individual Educational Needs" is established consisting of members appointed by the Commissioner of Education, the Commissioner of Mental Health, the President of the Massachusetts Psychological Association, and the Mayor of Boston. The purpose of the Commission would be to oversee the administration of a battery of psychological tests rationally related to an accurate determination of a student's learning ability, to devise educational programs to meet individual educational needs, to insure that the tests be administered by qualified psychologists, and to establish consultation procedures by which parents might participate in the placement of their children.

The plaintiffs in *Stewart* have gone one step beyond *Covarrubias* in asking that IQ tests recognize not only the influence of the Black culture in determining learning ability but that they also be sensitive to the influence which poverty has on educational potential. The creation of a Commission on Individual Educational Needs would provide for the continuing revision of special education long after the specific needs which prompted this litigation were satisfied.

Elimination of Racial Segregation

Finally, in response to the United States Supreme Court's mandate to integrate the nation's schools immediately, Sunflower County, Mississippi, proposed that it use intelligence tests to place students in certain schools. Under the plan, beginning in September 1969, children in the first three grades were given the *California Test of Basic Skills*. Those who ranked in the top quarter in test scores were sent to the nearest of three schools. This included all the white and 38 of the black children. Children in the lower three-quarters were sent to the nearest of five schools. This included the remaining 4,100 black children and no white children.

On August 13, 1970, the Court of Appeals for the Fifth Circuit affirmed the District Court's review of the plan which ordered that the assignment of students based on the achievement testing program be rescinded at the close of the 1970 school year. The Court of Appeals held that any use of intelligence tests to maintain a dual instead of a unitary school system is prohibited as inconsistent with recent Supreme Court decisions.

Implications

Special education procedures serve to highlight institutional racism in many school systems. Many minority group children are systematically deprived of their rights to an education. Mercer (1970) examined the process of special placement in the public schools of Riverside, California. She found that three times more Mexican-Americans and two and a half times more Negroes than would be expected from their percentage in the population tested at an IQ of 79 or below on the *Stanford-Binet Intelligence Test.*

Dunn (1968) postulated that minority children constitute well over half of those enrolled in this country's special education classes:

> . . . there are approximately 32,000 teachers of the retarded employed by local school systems—over one-third of all special educators in the nation. In my best judgment, about 60 to 80 percent of the pupils taught by these teachers are children from low status backgrounds—including Afro-Americans, American Indians, Mexicans, and Puerto Rican Americans [p. 6].

Hall (1970) claims there are possibly 15 times as many black children as white in classes for the mentally retarded based on the Jensen report (1969). Franks (1971) found, in an examination of 11 Missouri school districts, that learning disability programs are predominantly composed of white, middle and upper social status children, while educable classes contain disproportionate numbers of black children. The racial breakdown in the educable classes was 34.21 percent black, 65.79 percent white. In the learning disability classes it was 3.22 percent black, 96.78 percent white.

Disproportionate numbers of minority group children alone would not support the argument that educable classes are failing to provide a meaningful educational experience. However, the negligible number of black children who return to general classes bears out the contention that special classes are failing. In a recent study Chenault (1970) found that once placed in an educable class, it is less likely that the black child will leave the class than the white:

> The exit pattern for EMR students placed in special classes was found to vary as a function of race. This finding is indicative of a school policy which basically retains Black students in special classes once they are diagnosed and placed. Caucasian students, on the other hand, were found to have access to exits such as transferring to parochial schools, moving from the school district, or entering the job market [p. ix, x].

Educators must examine their use of intelligence test scores. Intelligence tests have been under attack for their unfair treatment of racial and cultural minorities for many years. Intelligence test scores and the other criteria currently used for special placement are separating out those children of ethnic and socioeconomic minorities whom the educational system has determined do not possess the necessary skills to achieve success in this white, middle class society. Such children are then relegated to classes containing disproportionate numbers of minority children. The likelihood that their school created handicaps will be remedied and that they will be replaced in the regular class is exceedingly small.

Some test publishers have joined in the criticism. However, when facing attacks on the culture bias of tests, the response is not always in terms of test reform. Instead the argument is presented that tests are merely performing the job assigned to them by general education. Lennon (1964) said:

> Let me offer you an analogy that may help in evaluating this issue of test fairness. If we take a youngster who has suffered malnutrition over a period of years . . . and put him on a scale, we may well discover that he is ten, or fifteen, or twenty pounds underweight. We do not then say the scale is biased because of the deprivation the child has suffered. We take this information as currently and accurately descriptive of an important fact about this child—a fact that can be used to his advantage in planning a program calculated to make up for the deficiencies in his earlier care. . . . I suggest to you that this is the way of looking at a test score. The test is giving us a piece of information about a child's performance here and now, which information if properly used, can be extremely helpful

> **in planning the educational endeavors of the child [p. 9].**

Educators will not be able to continue to hide behind the indefensible and inexcusable use of intelligence test scores as the primary basis for identifying, labeling and placing children in special classes. The psychologists' defense has been that it is not the problem of the instrumentation but rather the way in which the results have been used. The educators' defense is that while test scores might not be the best indicators of mental retardation, they are the most easily attainable and accurate predictor of school achievement. These arguments overlook the fact that the results are not meaningful since minority group children were not represented in the sample group on which the norms were based and that the application of such instruments to them deprives them of their basic rights. Perhaps what should be recognized is that while trying to weigh the child, a ruler rather than a scale is being used.

The interaction of the child and his environment must be examined carefully in every diagnostic workup. Pathology may reside not in the child but in the school. In such situations, behavior judged as maladaptive by one set of norms may be appropriate and necessary. The ease with which the white controlled educational system has applied the instrument, the label, and the stigma of special class placement on minority children is a function of institutionalized racism in the school setting. Educators "know" that black kids are dumb; the tests "prove" that they are dumb; and then the special education programing ensures the kinds of behaviors through which such children can demonstrate that they are dumb. Diagnostic attention must be given to the personnel and to the system before any child or group of children is relegated to other than regular educational experiences.

University training of educators and psychologists must be revised to meet the demands of consumers. During the preparation of this paper, the authors had extended contacts with faculty from many universities and with a great number of students from a variety of disciplines. There was a wide range of awareness about the litigation and its implications. However, primary concern of the majority of faculty was training more psychologists to administer the standardized tests and teachers to work with children in segregated classrooms. Unfortunately, many of the university students reflected the same values. Even programs that were moving beyond this were not fully integrating what must be done to improve special education programing, to break the cycle of built in discrimination and failure in many public school students, and to prepare professionals able to develop and apply alternating approaches to child needs.

There will be accountability for program decisions. It is obvious that educators and psychologists must have a greater concern about the negative effects of the separation of a child from the mainstream of education. Such movement is seen by the courts as a deprivation of rights and it is becoming increasingly evident that due process must be followed in such cases. Parents must be active, informed participants in the decision making process. Special class placement must be demonstrated as an effective tool to assist the child in his education, and placement must not be a one way, school life sentence. Routine review and reevaluations, improved programing, and relevant experiences must be available, and their value to the child must be demonstrated.

Maintaining the status quo will be costly. A final implication of the court cases is that the continuation of the existing practices may cost money. The cases which are asking for compensatory and punitive damages have not as yet been decided. However, if the $20,000 being requested for each plaintiff in the *Stewart v. Phillips* case in Boston is awarded, this will cost the Boston school system millions of dollars. Lest the individual professional feel somewhat apart from this, there has been some discussion of malpractice suits directed at individual practitioners who, because of their own roles in the identification, labeling, and placement process, do in fact engage in improper, unethical, or negligent treatment which results in real damage to the child.

Conclusions

The rapid growth of litigation indicates that parents of minority group children have become increasingly dissatisfied with the criteria used to determine special class placement and with the level of educational programing their children receive after placement. Generally, school systems have been unresponsive to pleas for change, so the parents have turned to the courts. Parents have not been alone in voicing their dissatisfaction. Increasingly, the use of intelligence tests, the viability of special education programing, and the relevance of the total school experience are coming under attack by professionals. Of great concern is the unfair treatment of racial and cultural minorities and the growing realization that educable classes are not remedying deficiencies in children.

The response of the profession must not be merely to protect itself but to serve the needs of children. The response to a court order to prevent inappropriate placements and to remove children from special classes must not result in dumping those children into regular classes without providing for their special needs. Responsible educators must devise special approaches and programs to assist such children within the regular class framework. The actions of the professionals should not focus on behaviors to protect themselves and their systems from court suits; emphasis must be on those actions which modify practices, improve programs, and serve as efficient and effective responses to the needs of individual children.

While litigation indicates the seriousness of the present situation, a basic question is raised: Who will direct educational reform, judges or educators? Judge Wright expressed his reluctance to make educational decisions in *Hobson:*

> It is regrettable, of course, that in deciding this case this court must act in an area so alien to its expertise. It would be far better indeed for these great social and political problems to be resolved in the political arena by other branches of government. But these are social and political problems which seem at times to defy such resolution. In such situations, under our system, the judiciary must bear a hand and accept its responsibility to assist in the solution where constitutional rights hang in the balance [p. 517].

Educators have a final opportunity to lead in the change, rather than have it imposed. Such leadership will require a careful reexamination of the behavior of school staff rather than school children. Each individual must examine his own role and his own contribution to a system which frequently is repressive, discriminatory, culturally and racially biased, and not responsive to the needs of children. Such a critical assessment is essential to the establishment of a personal accountability for what is done to children in schools. People, rather than systems, hurt other people. Each educator must decide whether he will continue dealing with the symptoms or start working on the cause.

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Handout 3

STUDY QUESTIONS FOR READING 7

1. What are the legal ramifications of tracking, or placing children in low ability groups within the regular class for most of the day?

2. What are the arguments in favor of tracking?

3. Do reseach findings support these arguments?

4. What are the arguments against tracking?

5. What are the possible effects of teacher expectancy? on student achievement?

6. Have you ever been tracked in a high, middle, or low ability group? How did you feel? Have you ever been denied entrance to a college or high school program primarily on the basis of standardized achievement test scores? How did you feel?

Handout 4

1. List 5 advantages of programmed instruction.

2. List 5 disadvantages of programmed instruction.

Handout 5

Guidelines for Observation

1. Choose 1 student in your class to observe. Choose a student who appears to have difficulty in one or more of the following areas:

    1. Attention problems
    2. Behavior problems
    3. Listening/hearing problems
        Difficulty following directions
    4. Visual problems:
        Problems with copying
        Problems understanding charts, etc.
    5. Academic problems
        Reading
        Math
        Spelling
        Other
    6. Writing problems
    7. Language problems
    8. Physical handicap

2. Describe the student briefly on the attached page. *Do not* refer to the student by *name*.

3. Observe the student for a least 10 minutes in each of the following settings: (If student never works in one of these settings, please indicate.)
    a. Large group
    b. Small group
    c. Individual work (with teacher, peer tutor, or alone)

4. Use your answers to fill in the Instructional Modification Chart.

Use Description of Instructional Settings as a guide.

Be prepared to discuss your observations in class.

Activity

Description of Student

1. Age______

2. Grade_____

3. Sex _____

4. Problem Areas

1.

2.

3.

4.

5.

6.

7.

5. Strengths (be *sure* to *include*)

1.

2.

3.

4.

5.

6.

7.

6. Setting in which student most often works ____________________________

7. Location in which student works ____________________________

8. Differences in curriculum, instructional equipment, etc., and purpose as you perceive it:

9. Teacher behaviors:

	Seldom		Frequent
Howoften does teacher call on student	1	2	3
How often does teacher work with student on 1-1 basis	1	2	3
How often does teacher scold student	1	2	3
How often does teacher praise student	1	2	3

10. Other comments

11.. Complete the attached checklist:

Instructional Modification Chart

Suggestions for Change

Setting Behaviors	Frequency	Space Arrangement	Purpose/Curriculum	Teacher Behavior
Individual Behaviors Observed	Observed	Observed	Observed	Observed
1. 2. 3. 4. 5.	Recommended Changes (if any)	Recommended Changes	Recommended Changes	Recommended Changes
Samll Group Behaviors Observed	Observed	Observed	Observed	Observed
1. 2. 3. 4. 5.	Recommended Changes (if any)	Recommended Changes	Recommended Changes	Recommended Changes

Instructional Modification Chart
Page 2

Setting Behaviors	Frequency	Space Arrangement	Purpose/Curriculum	Teacher Behavior
Large Group Behaviors Observed	Observed	Observed	Observed	Observed
1. 2. 3. 4. 5.	Recommended Changes (if any)	Recommended Changes	Recommended Changes	Recommended Changes

SCHEDULING LEARNING ACTIVITIES

by
M. Evelyn Swartz
University of Kansas

Although teachers have various limits set, such as lunch time and recess time, they often have the responsibility of planning their own daily and weekly schedules. Care must be given so that the resulting schedules take into consideration the types of activities being used, programs in operation in the school, e.g., library periods, etc., and the particular needs of the learners. Teachers who have exceptional children in their rooms will find it necessary, at times, to have a schedule that allows for their special needs, needs which may be different from others in the room. This module gives preservice teachers opportunities to plan schedules that include a variety of special needs that must be attended to.

Student Outcomes

Upon completion of this module, the student will be able to plan daily/weekly schedules for a classroom with exceptional learners.

Instructor Information

Prerequisites:

Before this module is begun, the student should be able to describe the characteristics of the normal and exceptional learner as these relate to classroom activities, make curricular choices for exceptional learners, and plan instructional programs that meet the individual needs of exceptional learners in all curricular areas.

Organization:

Two student objectives and six enabling activities comprise this module. All activities are designed to enable the student to focus on the practical application of knowledge about exceptional learners and curricular requirements.

Content Overview:

The content for this module synthesizes and applies understandings acquired earlier. Since the activities are, in a sense, field-based, the content consists of application activities. These inculde:

1. Identification of the characteristics and special needs of exceptional children as these relate to daily/weekly schedules.

2. Development of alternative daily/weekly schedules.

Suggestions for Teaching:

Preservice teachers who use this module must have a thorough understanding of the characteristics of exceptional learners and overall school schedules and time commitments. Some review may be necessary. The instructor will also find it useful to identify some classrooms that can be used in this module. No other special suggestions are needed for the module. The teaching time, exclusive of outside assignments is approximately one hour.

Suggestions for Evaluation:

No special evaluation is included in the module. The instructor may use the schedules developed by the learner as an evaluation device.

SCHEDULING LEARNING ACTIVITIES

by
M. Evelyn Swartz
University of Kansas

Prospectus

As a teacher you will have the responsibility for planning daily/weekly schedules. No teacher is free to plan the whole schedule because of the need for a school schedule. Within the limits, however, you must develop the ability to devise a daily/weekly schedule that takes care of all the educational needs of all the children. Scheduling is particularly important when one considers the needs of exceptional learners who may be out of the room part of the day. This module will help you learn to plan daily/weekly schedules for a class.

Student Objectives	Enabling Activities
1. The student will be able to describe the points that must be considered in making a daily/weekly schedule.	1. Students will select a classroom that has at least one exceptional child in it.
	2. The teacher of that classroom will be interviewed by the learner to find out what special scheduling needs these children have. Information about any time commitments that must be made to other school programs will be obtained.
	3. A checklist of points to be considered for schedules will be developed.
2. The student will devise three daily/weekly schedules for an elementary classroom.	1. The student will plan three alternate daily/weekly schedules for the classroom.
	2. Each schedule will be presented in class along with a rationale for each.
	3. Students will critique the schedules by using the checklist developed earlier.

PLANNING CLASSROOM LAYOUTS FOR EXCEPTIONAL LEARNERS

by
M. Evelyn Swartz
University of Kansas

In planning learning situations for the exceptional learner, the major consideration is, and should be, the teaching-learning program. For the exceptional learner, however, considerable attention must be given to the physical arrangement of the classroom, so that a comfortable, safe environment that is conducive to learning is arranged. Therefore, this module is designed to focus the attention of the physical layout of the classroom, an often neglected aspect of teacher education. The module accomplishes this by helping the preservive teacher study a room with the exceptional child in mind, rearrange that room and make whatever changes can be made, and plan seating arrangement for various learning activities.

Student Outcomes

> Upon completion of this module, the student will be able to arrange a classroom so that special requirements of exceptional children will be considered.

Instructor Information

Prerequisites:

Before this module is begun, the student should be able to describe the characteristics of the normal and expceptional learner as these relate to classroom activities, make curricular choices for exceptional learners, and plan instructional programs that meet the individual needs of exceptional learners in all curricular areas.

Organization:

Three student objectives and six enabling activities comprise this module. The majority of the activities are practical in nature; only one reading is required. The activities can be carried out in any methods class that has access to elementary classrooms.

Content Overview:

The content for this module consists of practical application of knowledge and skills acquired in other activities. The activities include:

1. Analysis and evaluation of an existing classroom to determine usability for exceptional learners.

2. Establishment of criteria to be used for assessing usability of a classroom for exceptional learners.

3. Procedures for arranging the physical layout of a classroom to accommodate exceptional learners.

Suggestions for Teaching:

It is very important that the preservice teachers using this module understand the special physical needs of exceptional children, as well as the intellectual and social needs. The instructor, might, therefore, find it helpful to spend some time reviewing this background so that the understandings of the learners can be applied to the practical situations found in this module.

The instructor will also find it helpful to locate classrooms students can use in their evaluations ahead of time. The teachers of these rooms should be included in the evaluation/analysis process to be used by the preservice teachers, thus making it possible for real changes to be made. If classroom where exceptional children are based can be found, the use of the module will be facilitated.

Since much of the content of this module is based on practical application, only one reading is included. It is recommended that his reading be done before the module is begun. The real thrust of the enabling activities is to require the learner to integrate and synthesize previously acquired information and apply this to a real situation. The teaching time for the module is approximately 1½ hours.

Suggestions for Evaluation:

No special evaluation procedures are given for this module. Instead, the student's completion of the written work can constitute the evaluation. If the instructor wants more rigorous evaluation, he/she can develop a procedure based on the activities included.

ARRANGING THE PHYSICAL ENVIRONMENT FOR THE EXCEPTIONAL LEARNER

by
M. Evelyn Swartz
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Prospectus

A task that teachers are required to do, but one seldom taught, is that of arranging seats, book shelves, traffic patterns, etc., so that the teaching-learning program will be facilitated. When exceptional learners are in the classroom, this becomes particularly important, since these learners may have special physical requirements that must be met in the room. This module will enable you to become aware of the need to analyze a classroom to determine the best arrangement of seats for various curricular activities and to meet the needs of individual children's physical, social and intellectual needs. A well-arranged room will not only facilitate learning, but it can also help you manage the instructional program and the behavior of children more effectively.

Student Objectives	Enabling Activities
1. The student will establish criteria to be used in evaluating the physical layout of a classroom.	1. Discussion: The topic of the discussion should be the physical, social and intellectual requirements of exceptional learners in the regular classroom.
	2. Develop a list of at least 10 criteria to be used in analyzing and evaluating a classroom, e.g., coat hooks, drinking fountains, obstacles in traffic patterns, opportunities for socialization.
2. The student will evaluate the physical layout of a classroom.	1. The critiria developed above will be used to study and evaluate the physical layout of an elementary classroom.
	2. On the basis of the evaluation, students will determine whether or not the classroom can be used; what modifications are necessary.
3. The student will identify 10 seating patterns to be used in the classroom.	1. Read Musgrave, pp. 46-66.
	2. Discuss advantages and disadvantages of each arrangement for various curricular areas and various learner needs.

Reading

1. Musgrave, G. Ray. *Individualized Instruction: Teaching Strategies Focusing on the Learner*. Boston: Allyn and Bacon, 1975, pp. 46-66.

How would you like to be invited to a party at someone's house and have the hostess seat you in a row formation so that you are looking at the backs of the necks of all the other guests, who are facing the hostess?

How would you like to attend concerts, films, lectures, and sports events and always have to sit in the back row, even though you paid the same price for a ticket as spectators who always sit in the front or middle rows?

Would you want the furniture in your home or office to be in the same place day in and day out for a year so that you would be forced to sit in one spot no matter what your activity, for about six hours every day?

If you had control of the seating arrangements in each of the mentioned situations, you would certainly choose the arrangement that fit the occasion best. Similarly, students in classrooms should be seated in formations that place them in the best situation for maximum learning opportunities. However, some schools in America still bolt students' desks and chairs to the floor, and others keep desks and chairs in rows where they are as stationary as they would be if they were bolted to the floor. All sorts of reasons are offered by those who want to keep a fixed seating arrangement:

> *"It is too much trouble to move furniture and students to fit activities."*
>
> *"I cannot control students when they move about because discipline gets out of hand."*
>
> *"Students have always sat in rows!"*
>
> *"Moving furniture causes housekeeping problems, and I don't believe moving furniture causes students to learn more."*

But most of these reasons are usually rationalizations used by people resistant to change.

If all students learned in precisely the same manner or reacted to classroom situations in the same way, then teachers could place all students in rows and mass teach them by using the same methods over and over again. Although many teachers do practice this type of teaching methodology, evidence clearly points to the fact that students have different learning styles. Therefore, teachers should use a variety of instructional formations so that each student may experience, at least a part of the time, a learning situation that best suits his particular learning style.

Even if educational gain did not result from particular instructional formations, it should be evident to everyone that students need to see each other face to face when they discuss topics with each other. During presentations and demonstrations, each student should be seated in the best position for observing the performance, and certainly, students should move from place to place during the school day.

These general considerations should be weighed before any particular formation is put into operation:

1. A home-base formation should provide teacher and students with a number of optional teaching-learning situations so that students may spend a considerable portion of their day at their home base rather than shifting continually from one special formation to another.
2. Some formations are more useful for teacher-centric methods of teaching, while other formations accommodate student-centric methods. The formation chosen for each lesson should suit the teaching method being used and provide a teaching-learning environment that is the very best for all concerned.
3. Many practices in the public schools are based on tradition. To implement change is difficult and, in some cases, unrewarding, but a change toward increased effectiveness is worth the price. Community and administrative support are necessary; however, involvement and successful experiences with the proposed change should be considered before implementation procedures.
4. Which formations to use depends on these factors: space, people, desired climate, the type of room, and equipment (including desks, chairs, tables, and other furniture).

Choosing the appropriate instructional formation allows teachers to focus on the learner, which results in more effective learning. The purpose here is to present a variety of instructional formations, to offer suggestions for making them flexible, and to suggest ways to encourage teachers to use them.

HOME-BASE FORMATIONS

Regardless of which administrative plan a school system or school building uses to organize students into learning groups, all students need a basic instructional formation. A home-base formation allows each student to have a space area, including furniture, that gives him a feeling of permanency and security. But while a home-base formation should stay in effect long enough to provide students with feelings of stability and security, the formation should be changed often enough to provide for variety and differences in tastes of students and teachers.

There are a number of home-base formations that teachers find beneficial for students and teaching situations. Following are diagrams, descriptions, and uses of some of the most popular.

Vertical Rows (Figure 2.1)

Probably the most popular formation for classroom instruction is the traditional vertical-rows formation. Because students have sat in this formation since the beginning of public education in America, some teachers feel secure operating from this type of formation. Many parents feel that their children are really learning when they look through the classroom doorway and observe students working diligently

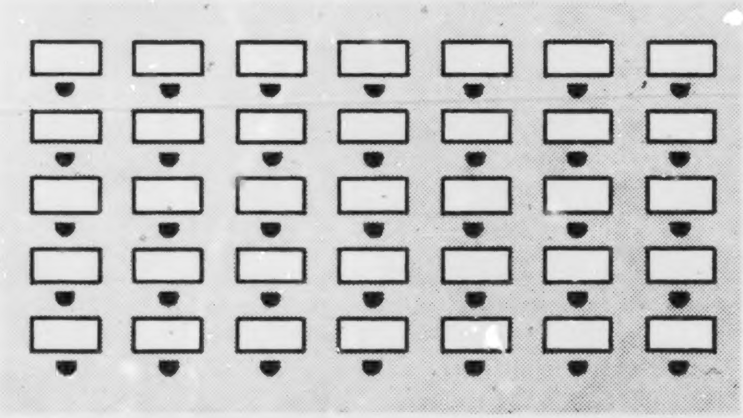

FIGURE 2.1 Vertical Rows

and quietly at desks placed in rows, just as they were when the parents went to school.

At times, vertical rows may be the best home-base formation to use, but teachers need to be aware of its limitations as a full-time formation. Following is a list of the advantages and limitations of vertical rows as a home-base formation.

ADVANTAGES

Useful for independent seatwork
Facilitates housekeeping
Useful for presentations
Useful for recitations
Facilitates monitoring chores
Allows use of row-completion games
Helps the teacher control students
Encourages children to listen
Convenient for giving tests

LIMITATIONS

Gives children unequal seating status
Prevents interaction among students
Gives all students the same instructional package
May result in poor eye contact with some students in the back of the room
Teacher is the star

Horizontal Rows (Figure 2.2)

Horizontal rows proved teachers with a structured home-base formation that places students closer to the scene of the

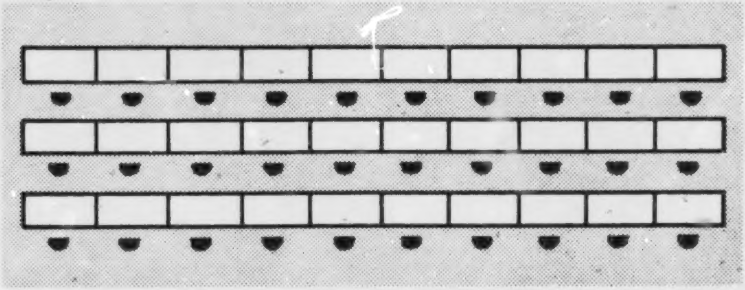

FIGURE 2.2 Horizontal Rows

action. In this formation, they are in a position to interact to a small degree with a peer both socially and academically. The uses and limitations are similar to those of vertical-row formations with some major differences.

ADVANTAGES

- Useful for independent seatwork
- Encourages children to listen
- Permits children to work in pairs
- Allows a walking teacher to check seatwork easily
- Facilitates housekeeping
- Useful for presentations
- Useful for recitations
- Useful for demonstrations
- Facilitates monitoring

LIMITATIONS

- Results in poor interaction among students
- Teacher is the star
- Students spend most of their time listening, writing, and reading
- All students receive the same instructional package

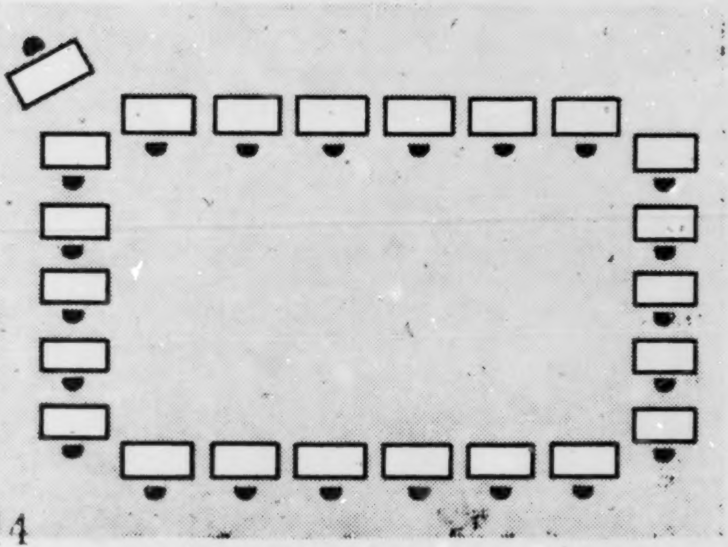

FIGURE 2.3 Square

Square (Figure 2.3)

Teachers who like to deviate from traditional rows for a home base formation while still maintaining structure for discipline purposes may choose the square. The square allows equal seating status for students while still maintaining many of the uses attributed to rows.

ADVANTAGES

Permits independent study
Permits interaction among students
Useful for discussion
Useful for symposiums
Allows children more space in which to move about
Center area good for center stage
Useful for demonstrations
Home-base formation

LIMITATIONS

Poor for whole-group presentations
Poor for films and other audience situations
Could cause special problems for school custodian
Affects teacher's ability to control the children

Circle (Figure 2.4)

The circle as a home-base formation is very similar to the square. The same uses and use limitations apply to both formations.

Cross or Wheel (Figure 2.5)

The cross, or wheel, formation is a good arrangement when areas of the room are needed for special displays, interest centers, interest stations, or activity areas. But children should not be kept in this formation for an extended period of time.

ADVANTAGES

Permits independent study
Useful for open-space activities
Allows room for interest areas

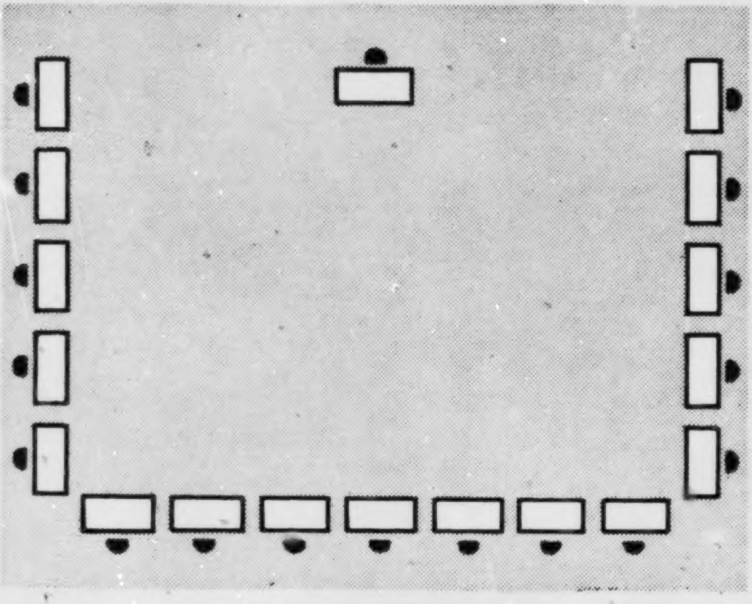

FIGURE 2.8 U Formation

Useful for lectures, presentations, recitations, and demonstrations

Useful for film and television viewing

Provides equal seating arrangement

Has open space for center activities

LIMITATIONS

Poor for whole-class teaching

Students are not in a good position for teacher's presentation

Students are relatively removed from presentation

I Formation (Figure 2.9)

The I formation places two distinct groups of students into one area. If the teacher wants to separate children according to grade level, subject concentration, or achievement differences, then the I formation forms a natural barrier between the two groups of students, allowing the teacher to operate with each group independently.

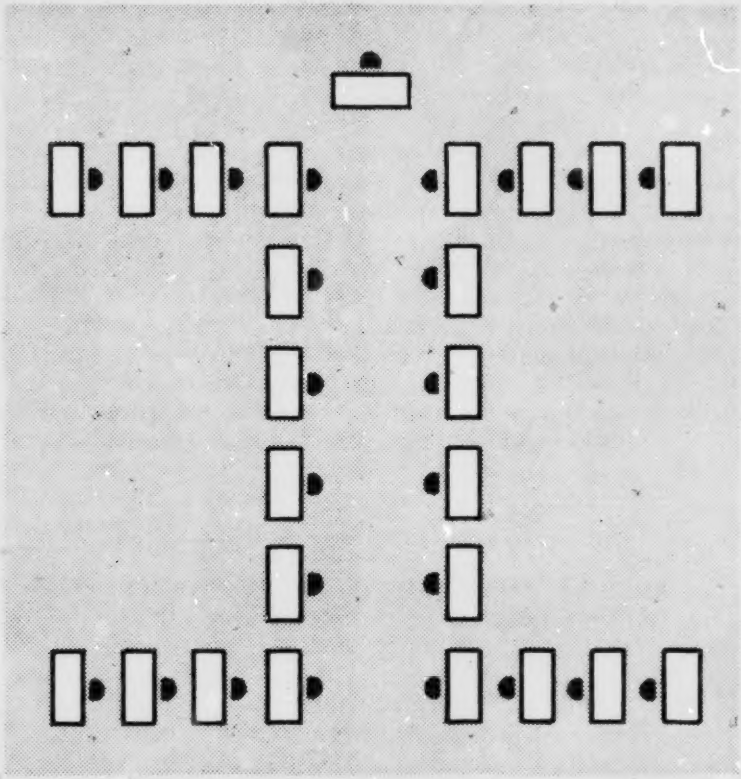

FIGURE 2.9 I Formation

ADVANTAGES

Permits individual seatwork in two distinct groups
Useful for classes in a multi-graded summer school
Appropriate for all types of teaching methods

LIMITATIONS

Divides class members
Formation cannot be used for all purposes

SPECIAL FORMATIONS

Students at all levels of their public school life enjoy, and profit from, moving into various special instructional formations during the school day. If the lessons are enhanced by instructional formations that accommodate what is being taught, then the few seconds that are spent changing formations is well worth the time and the effort.

Some teachers like to teach and label all the formations planned for specific learning activities at the beginning of the school term, while others prefer to teach and label each special formation as it becomes necessary just prior to the appropriate activity. It is usually necessary to have a time limit for moving from one formation to another. Noise level and behavior expectations must be taught and reinforced. Good performance should be rewarded with extrinsic and intrinsic rewards. Keep the purpose of the formation in mind at all times. If the home-base formation will achieve the same purpose, don't form a new special structure.

Following are some of the special instructional formations.

Stack Formation (Figure 2.10)

The stack formation places students and teacher closer to each other and nearer the scene of action. The formation creates a feeling of unity and "we-ness," making students feel closer emotionally. This formation should not be used often, and it should be of short duration. Once it has fulfilled the purpose for which it was formed, the formation should be broken up. This formation is especially helpful when a teacher needs complete attention from students. Eye contact and attention from students help teacher and students to concentrate on the immediate topic. Because this formation brings students close together, disciplinary procedures and expectations must be taught.

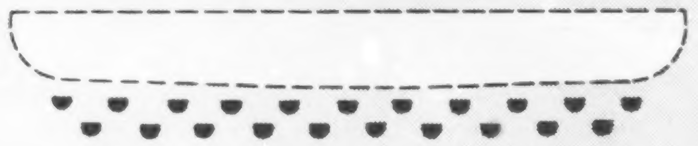

FIGURE 2.10 Stack Formations

ADVANTAGES

Useful for presentations
Useful for demonstrations
Facilitates teacher-student planning
Useful for chalkboard sharing, flannel-board sharing, and flip-board sharing
Convenient storytelling
Useful for brainstorming
Useful for panels and symposiums
Useful for sociodramas
Useful for filmstrips
Useful for informal lectures
Useful for mediated lectures
Useful for media presentations
Useful for evaluative sessions

Whole-Group Formation (Figure 2.11)

The whole-group formation is the only way to arrange thirty or forty students into a discussion situation where everyone is involved, and it is the only formation in which true discussion may be taught.

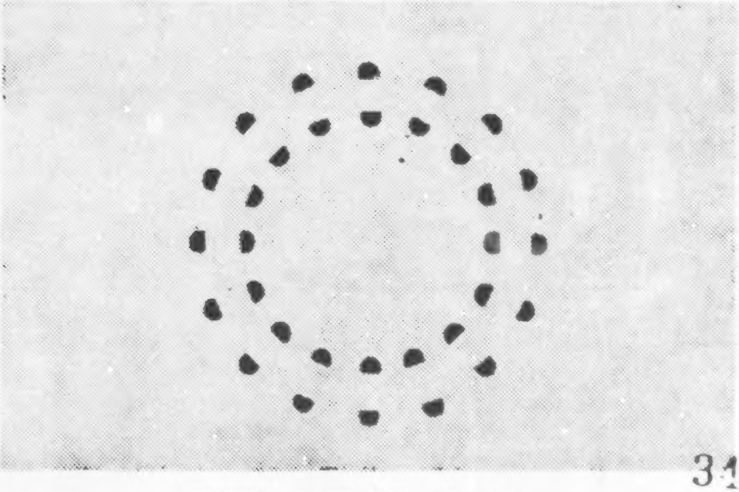

FIGURE 2.11 Whole-Class Discussion

This formation places the emphasis for learning on student participation. Students learn by involvement. Their experiences are not aimless, since constant evaluations of discussion techniques are made by participants, peers, and teacher.

Round-Table Discussion (Figure 2.12)

The round-table discussion formation places eight participants, who have prepared well in advance, around a table. Round-table participants have a dual responsibility—to present and to discuss. The other class members surround the participants in a formation that allows everyone to see and to listen to the round-table participants. After the round-table members present and discuss for fifteen or twenty minutes, everyone joins in the discussion, asking questions, making comments, or debating points. The round-table formation involves the whole class in the activity in a meaningful manner after the initial presentation by round-table discussion members.

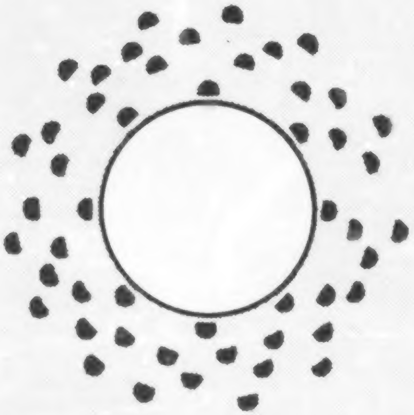

FIGURE 2.12 Round-Table Discussion

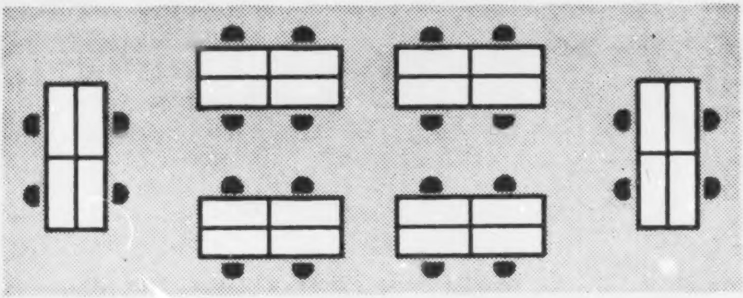

FIGURE 2.13 Small-Group Discussion

Small-Group Discussion (Figure 2.13)

If facing-groups-of-four is the home-base formation, changing into a small-group formation for buzz groups, committee work, work sessions, or discovery lessons might be a waste of time. When using any of the other home-base formations,

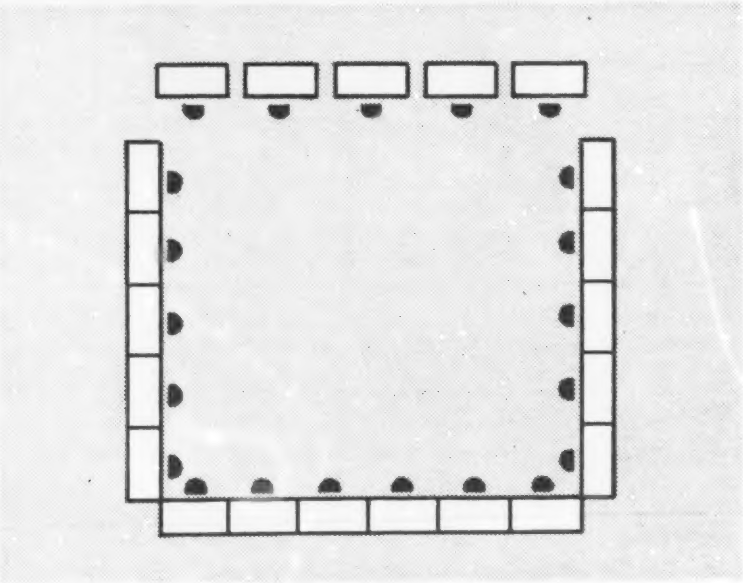

FIGURE 2.14 Individual Work Formation

however, it is good practice to change to a small-group formation when information is to be shared. Sometimes this change is useful even when using the facing-groups-of-four formation, for each group in that formation may have been determined to achieve a specific purpose, and teacher and students may prefer to move into a special small-group formation to change group membership to achieve a different purpose. Small-group procedures and techniques have been discussed in detail in Chapter 1.

Individual-Work Formation (Figure 2.14)

The individual-work formation is a special formation designed to allow students to concentrate on an important independent task. This formation is especially adaptable for taking standardized tests or for completing programmed modules. It is also a good arrangement for machine and computer stations. Since this formation is designed for one purpose, it should be dissolved as soon as that purpose has been achieved.

Interest Stations (Figure 2.15)

Interest stations are primarily instructional centers designed to teach a concept or a related group of concepts in a variety of ways. The stations may be designed to teach different concepts that lead to overall goals and objectives.

Interest stations may be used effectively in a team-teaching situation. Each member of the team is the instructional leader of an interest station, and at a designated time either teachers or students move in a carrousel rotation pattern from one interest station to the next.

Instructional leaders may also teach a group of children the same concept at each interest station, then conduct a whole-class sharing session after the station lesson.

Interest Centers (Figure 2.16)

35 While interest stations are designed primarily for instructional purposes and are dissolved after one lesson or one day, interest centers are placed in the classroom to accommodate and enrich students' interests in certain areas on a long-range basis.

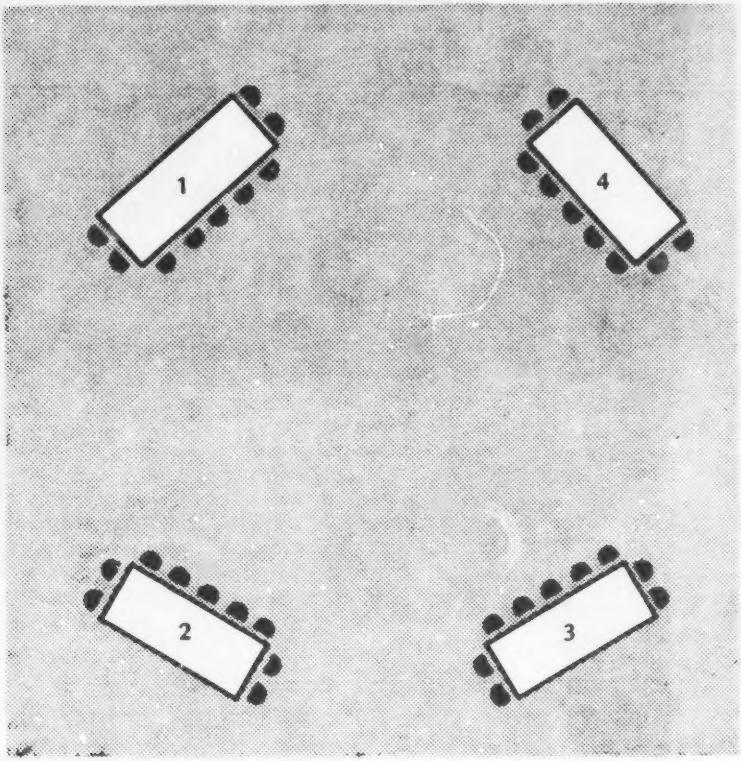

FIGURE 2.15 Interest Stations

Successful centers are designed well so that students anticipate spending time in the area to pursue the ideas presented there. Too many centers are designed and built on the basis of teacher interest and expertise instead of student interest and involvement. After a period of time, depending on the popularity and effectiveness of the center, the center should be dissolved and another center should be built to accommodate other interests.

Interest centers may be built around any interest. Some of the most common centers include recreational reading centers, creative writing centers, listening to music centers, science centers, mathematics problems and games centers, project centers, and special centers for departmentalized subjects.

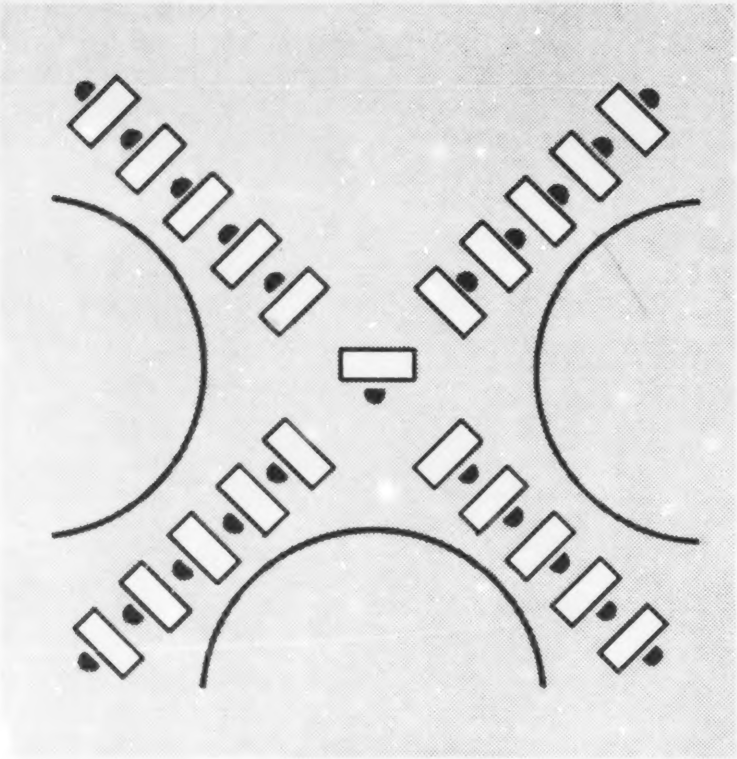

FIGURE 2.16 Interest Centers

Whole-Class Debate (Figure 2.17)

The whole-class-debate formation is designed to separate students on opposing teams so that students on one side of the issue will be facing students arguing the opposing view. The space separating the two teams also serves as a space station for the teacher-moderator. This is the best formation for whole-class debate, but it has very little to offer for other activities, so the formation is a short-term one and should be dissolved as soon as the activity is terminated.

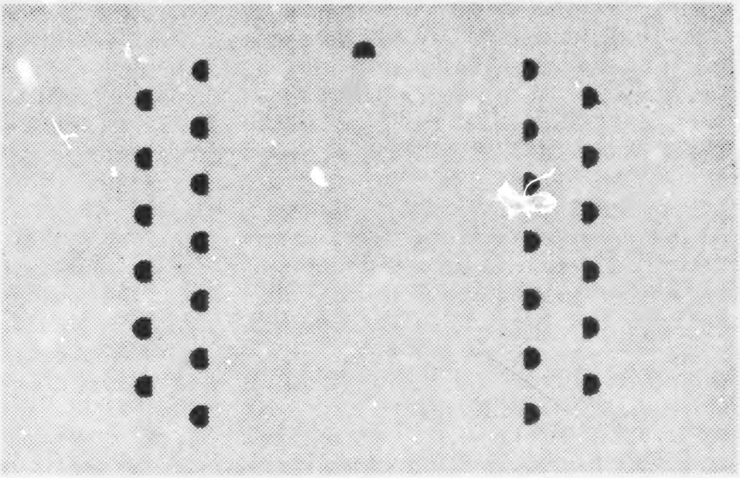

FIGURE 2.17 Whole-Class Debate Formation

INTRODUCING INSTRUCTIONAL FORMATIONS TO THE TEACHER

Teachers operate in a teaching-learning situation according to a set of attitudes and beliefs about themselves that has a direct relationship to how they feel about others. Regardless of administrative policies or community pressures, teachers do not violate their basic beliefs. Their roles during the school day are based on their philosophy of life and philosophy of education.

Teachers are willing to change practices only if the proposed change is congruent with their fundamental ideologies—and then, only if the proposed change works for them, resulting in a better teaching-learning situation as they see it.

The organizational format for implementing a variety of instructional formations should be much more extensive than mere administrative edict or faculty meetings designed to explain why and how to teach using multiple formations. Sessions should be designed to allow teachers to experience each instructional formation from a learner's point of view. Such sessions would allow teachers to learn the methodology while at the same time determining how they feel about it. Concurrently, the different formations should be modeled with the teacher in her teaching location. Then, teachers and students should be videotaped as they experience the student-centric teaching methods that occur because of the instructional formation. As teachers meet with videotape feedback consultants, they learn to critique and to evaluate their own lessons in light of program objectives. Special aid and encouragement can be provided for those teachers asking for additional help.

Of course, a program of this sort can be effective only if the administrative personnel, especially the building principals, believe that multiple formations are actually worthwhile. Administrators can be very influential by supporting and implementing multiple formations on a continuing basis.

The increase in creative learning through student involvement and interaction will provide reason enough for the teacher to use and adapt instructional formations continually to meet students' needs.

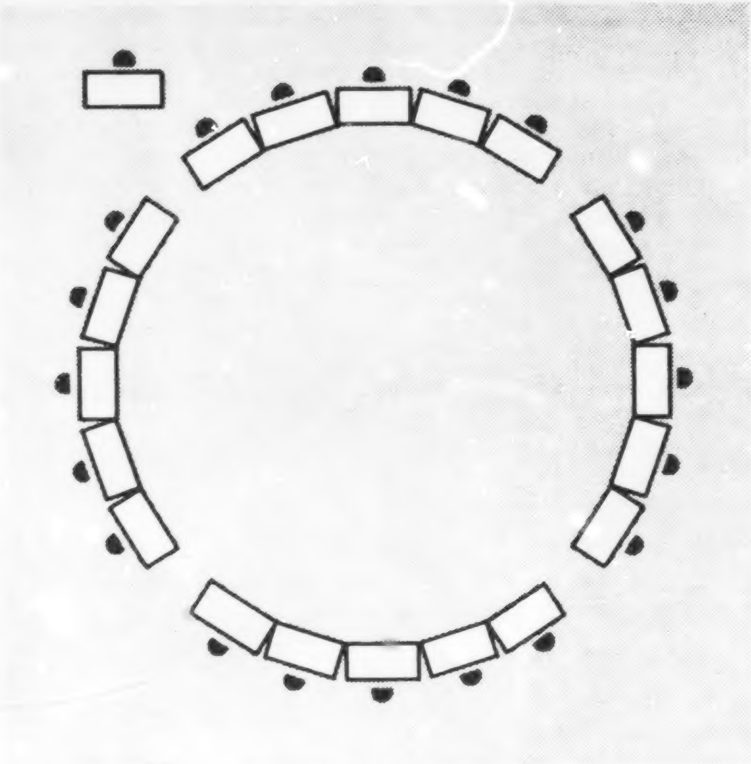

FIGURE 2.4 Circle

Allows room for interest centers

Allows teacher to teach students who are studying different subjects, units, topics, or lessons

Convenient for giving tests

LIMITATIONS

Poor for presentations, films, or listening

Not for interaction lessons at desks

Poor for whole-group activity

Facing Groups of Four (Figure 2.6)

The facing-groups-of-four formation offers many opportunities for students to interact. They learn how to operate

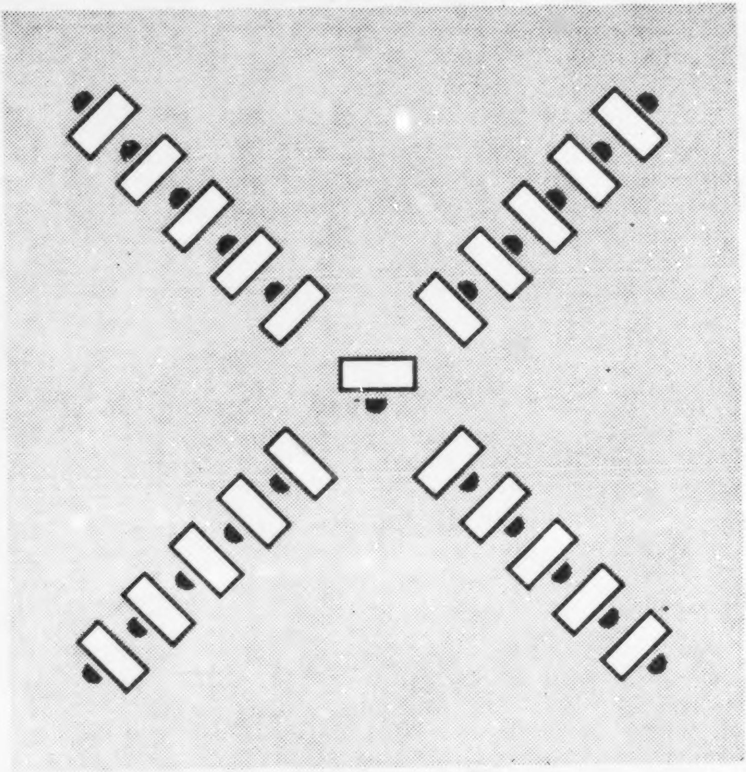

FIGURE 2.5 Cross or Wheel

individually and as members of a small group. This formation is a basic formation for many student-centric teaching methods. However, since this is not a tightly structured formation, it should not be used by teachers who have not established disciplinary boundaries and procedures with students.

ADVANTAGES

Encourages student interaction
Allows sharing of equipment and supplies
Useful for all types of group work
Useful for student-centric teaching methods

LIMITATIONS

Poor for lectures
Poor for presentations

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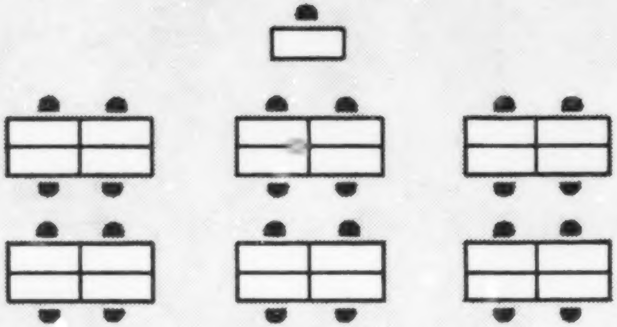

FIGURE 2.6 Facing Groups of Four

- Poor for any whole-class teaching
- Cliques may form if the formation is used for a long period

Pairs (Figure 2.7)

A pair formation offers a wide variety of uses, as well as limitations. Placing students in pairs is an introductory step toward placing them in larger groups, because many of the social skills for getting along with one person are necessary for getting along with a larger number of students. All types of groups, such as achievement level, needed skills, social, polar, and interest, may be formed by two class members in preparation for the same types of groups with a greater number of participants.

ADVANTAGES

- Useful for all presentation methods
- Useful for all types of group methods
- Useful for seatwork—Special projects
- Useful for all types of individual and group activities
- Allows teacher to use both teacher-centric and student-centric methods

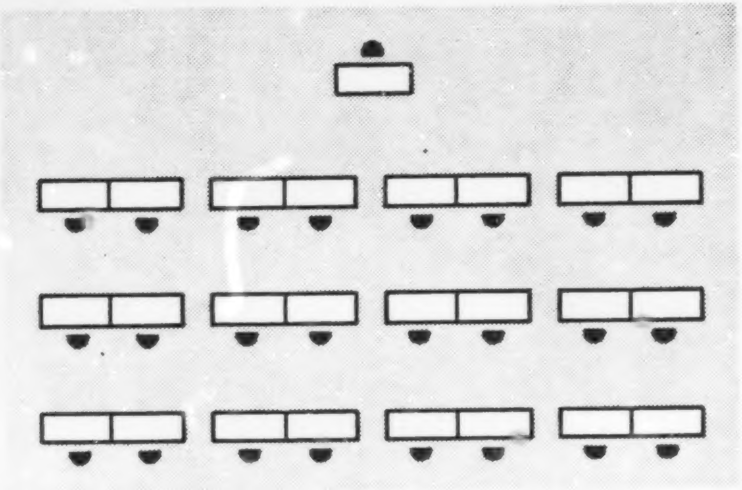

FIGURE 2.7 Pairs

LIMITATIONS

Pairs are static
Partners may be unhappy together
Pair members could become too dependent on each other
Pair members may not be compatible (one worker, one learner—cannot resolve differences)
May stifle individuality as pair members adapt to a paired situation

U Formation (Figure 2.8)

The U formation is actually three sides of a square, but the open space at the front permits more flexibility and diversification. Presentations, films, lectures, and recitations may be conducted, as well as discussions and group work.

ADVANTAGES

Useful for independent seatwork
Useful for group work
Useful for discussions
Useful for panels and symposiums
Useful for structured study